EXPOSITORY
WRITING

description (to the particular)
exposition (" " general)
Intent of author. - - -

paranomasia - double entendre

Paraphrase what the author says.
Interpretation " " " means.

Tau Sigma Phi
Penn State

Never use "WHEN" in a definition.
Do not use any part of the word in the definition.

There are no uninteresting subjects. There are only uninteresting treatment.

STYLE (Requirements.)

A- Accuracy.
B- Truth.
C- Sympathy.
D- Understanding.
E. Power.
F- Beauty.
G- Sincevity
H- Balance.
I- Rhythm.
J- Earnestness

STORY FROM CHARACTER.

A. DOMINANT TRAIT.

B. CONTRASTING FEATURE (ANTIDOTE)

C. UNDERSTAND CHARACTER IN EVERY MOOD.

D. PROPER DIVISION

1. Birth place.
2. Climate.
3. Influence.
4. Parentage.
5. Profession.
6. Topography.

CHARACTER POSE.

A. CHEERFUL - CYNICAL - STOICAL.

B. ACQUISITIVENESS

1- SELFISHNESS
2- JEALOUSY
3- MISERLINESS
4- THRIFT

C. EGOTISM

D GREGARIOUSNESS

1. FRATERNITY
2. HOME
3. College.
4. CITY
5- TOWN
6. STATE.

EXPOSITORY WRITING

By

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PREFACE

This present volume has grown out of the experience of a number of years. It had its beginning as a set of mimeographed sheets. Then it became a thirty-six page booklet. The present book is simply the grown-up state of the material presented many times to freshmen.

The volume is arranged in a more or less arbitrary fashion, for the material it deals with is so varied in character that there is no one arrangement that cannot be changed for another just as good. Effort has been made, however, to proceed from what seems to give the least difficulty to that which seems to offer the most. Consequently, those types of exposition that are merely redactions of the work of another have been presented first. The expositions of a more or less literary character have been placed second. A similar arrangement has been maintained for the scientific and technical material. Those expository types that prepare the way for argumentative writing have been placed last as being the most difficult and the most abstract of all those considered.

In order that it might not interfere with the essential unity of the book, the material on notetaking has been put in an appendix. It is suggested, however, that in using the volume it might be well to

begin with the appendix; for, since much of the necessary material for expositions must be gathered in the form of notes, it is well, at the outset, to know something of the best ways of gathering that material.

As an aid to understanding the various types of exposition that are here considered, selections have been made from the writings of a number of authors. The endeavor has been made to select, for the most part, examples that have not been used in every textbook of selections. A conscious effort has been made to select illustrative material from as many different fields as possible. This has been done to add variety to the text, and to call to the student's attention the desirability of his having some acquaintance with other fields of interest than those upon which his quest is bent at the present time. The author's purpose has also been to use as much of the more modern work as possible. It is hoped that a just proportion has been maintained between the work of those whose efforts have been tried and proved and those who have but recently begun to write. To all whose work has been so kindly offered the author, he returns his most sincere thanks.

The exercises for the student that have been placed at the end of each principal section of the text are not meant to be exhaustive. Too many texts have been written that do all the work for the student and for the instructor. That fault I have tried to avoid. The exercises are intended merely as suggestions.

Other and better methods of testing the manner in which the student has grasped the facts of the text should arise as the subject matter is discussed.

The text itself is meant to be expanded by the teacher. It contains, it is believed, all of the essential facts in connection with each of the matters discussed. These facts have been presented as concretely and as succinctly as it was possible to present them.

Much help has been given the author by his colleagues. To Professors Mason Long, T. J. Gates, and C. O. Ridenour especial thanks are due for their helpful suggestions. To Professor W. S. Strawinski, of the Department of English of the Harrisburg Technical High School, my gratitude is due for the suggestions he made, both with regard to the material in the manuscript and the general form that the material should take in the book. My thanks are also due Professor Howard G. Baker for his assistance in reading the proof.

W. S. D.

STATE COLLEGE, PENNSYLVANIA

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EXPOSITORY WRITING

EXPOSITORY WRITING

CHAPTER I

The Nature and Function of Exposition

What Is Exposition? *Exposition* is that form of composition that is concerned with the clear, adequate, and impartial unfolding of any matter that comes within the realm of human knowledge. Its object is to set forth, in language familiar to the auditor or reader, matters otherwise not clearly understood. It attempts to make clear what a particular idea, object, or theory is; how ideas, principles, institutions, devices, and processes are constituted, constructed, or operated; or why the particular matter under consideration exists as we find it. In other words, exposition seeks to present the what, the how, and the why of matters of human knowledge. It interprets, it expounds, it elucidates. Everything is its subject matter.

Exposition is the most universally used of all the so-called forms of composition. It forms the basis of all arguments. It is the body of all reports, textbooks, and teaching. It is the medium through which everyone makes himself understood. Some one is always explaining some new or some old idea

to others. The newspaper editorial constantly uses it; the popular page of the Sunday paper revels in it; and most magazines feature one or more articles of an expository nature. The minister, when he preaches, expounds a doctrine or text; the teacher's main work is explanation; and the student constantly, in class and out, tries to make clear what he knows or endeavors to explain his deficiencies of knowledge. All these are expositions. All of them have for their purpose the clarification of some matter of knowledge that otherwise would be obscure. Exposition is, strictly speaking, a process in composition whereby we are led from the darkness of ignorance to the light of knowledge.

Exposition Compared with Other Forms of Writing. Exposition differs from *description* in two essential particulars. First, description is essentially an artistic production. In order to effect its purpose, it may intensify the coloring; it may gloss over deficiencies; it may omit particulars or invent new ones. Its only object is to bring to the reader the individual picture as the writer sees it. Exposition, on the other hand, demands an absolutely truthful presentation of all the essential particulars of an object. If it omits any ideas or facts, it is only because those ideas or facts are nonessentials or peculiarities.

In the second place, description deals only with particular objects; exposition, with typical or generalized objects. A good description shows how the object described differs from all other objects of the

same class or genus. An exposition, however, points out those similarities—or, as they are called, essentials—that make the object under consideration like all the other members of the class or genus. Exposition is concerned primarily with types of objects or with principles of action rather than with particularizations.

What is true of description with regard to its relationship to exposition is also true of *narration*. A pure narrative is specific; an exposition is general. If one should tell of the life of a particular freshman, a narrative would result; if he were to recount those typically freshman phenomena that characterize the lives of all freshmen, an exposition of a freshman would result.

Both description and narration are the bases of particular forms of exposition, like the expositions of the device and of the process. Accordingly, it will be necessary to explain these two methods at length in a later chapter. For the present, it is only necessary to make this general discrimination.

Argumentation, the third of the four forms of discourse, is concerned with the presentation of only one side of a question in dispute; exposition, in all cases where dispute exists, presents both sides. Argumentation seeks to convince and persuade the reader or the hearer of the truth of one side of the matter in controversy and, to that end, uses only those facts that will prove its case; exposition, having no other aim than to seek the truth, presents the

facts as it finds them, both those for and those against the proposition under discussion. If the writer of an exposition has arrived at any conclusions as a result of the facts that he has presented, he does not always feel that it is necessary for him to state them: usually, it is sufficient for him to have presented the facts of the matter clearly, cogently, and adequately. When the facts are so stated, the hearer or reader is convinced; no necessity for a formal conclusion exists. If, however, a conclusion is stated, it is always based on established principles and is arrived at by incontrovertible methods. Exposition seeks to impart knowledge; argument seeks to make converts. The spirit of exposition is the spirit of the real teacher; the spirit of argument is that of the zealot or the partisan.

A word of warning needs to be offered here. Often the subtlest arguments are those that, apparently stating all the facts with absolute fairness, succeed, by suppressing enough of those that may be advanced with perfect justice by the opposition, in producing a false impression. This method is characteristic of the political speech and of many legal arguments.

Form of Exposition. Exposition has no set form. It may employ the same form as the description, the narrative, or even the argument. Or, it may employ any combination of forms. An exposition cannot be detected, therefore, by any characteristics of external form that it may possess, such as arrangement of parts or the like. In general,

it may be said, exposition endeavors to move from the simple to the complex or from the known to the unknown. Each exposition, however, is a problem separate and distinct from the problem presented by every other exposition. The path, therefore, is never twice the same for the writer of such compositions. Each new subject demands a treatment that is different from the treatment accorded every other subject.

How then can we determine what is exposition and what is not? The object sought by the writer is the determining factor; if the intention of a particular composition is to explain, exposition results. Exposition is an intention rather than a hard and fast mold; it is a point of view rather than a form. It is always designed to make clear matters that are obscure and to set forth honestly all that it touches.

Exposition and the Rules of Composition. Exposition, perhaps more than any other type of writing, demands a strict adherence to the rules of composition and rhetoric. Furthermore, rules of grammar and arrangement must be rigidly followed since clearness is an absolute essential. The fact that a particular book or article is concerned with chemistry or zoölogy or some kindred science does not excuse its writer for using dangling modifiers or parts not in agreement. The run-on sentence, the comma fault, the misuse of adjective for adverb, the substitution of singular for plural, to mention only a few of the more common errors, are no more

excusable in a volume on a technical or scientific subject than they are in a textbook on composition or in a literary production. In all writing, and especially in exposition, everything that makes for the least obscurity should be avoided. The meaning of each passage should always be immediately evident. As a result, a coherent arrangement is necessary. The parts must dovetail closely into one another so that each part will lead inevitably and unmistakably to those that follow it. There must never be any yawning gaps in the meaning where the reader must hesitate, nor should there be any digressions that will lead him astray. Everything must move unhesitatingly forward toward a complete understanding of the subject. Such a result can come only from a careful use of language and from a rigid regard for the demands of good writing.

The English language is identical for the literary man, the professional man, the technical man. The means by which the cardinal qualities of clearness, force, and elegance are secured by one can be utilized with equal success by the others. This cannot be said too strongly or too often in these days of over-specialization and over-refinement, when volumes are appearing constantly on country English and city English, on agricultural English and technical English, on engineering English and business English. English is English as truly as a rose is a rose. The English language may be used to advertise machinery or to recount engineering

feats; it may describe nature or set forth the wonders of science even as it is used to stir men's souls to action or reprove mankind for its misdeeds. In every case it is the same language, subject to the same rules of syntax, the same rules of composition, and the same rules of structural form. The words chosen to convey the thought may vary, but the rules governing the way in which those words are arranged remain constant. All of them are the means by which compositions are made effective and readable. Every composition, regardless of the use to which it is to be put, demands unity of thought, coherence of expression, and emphasis of particular parts as well as a certain amount of charm of expression.

The following statement quoted from a reputable agricultural journal illustrates clearly the wrong impression that results from a careless construction of a sentence.

> If the housewife will pour a couple of tablespoonfuls of kerosene down the sink at night and follow the next morning with a kettle full of boiling water she will not be troubled with clogged pipes.

It is unnecessary to multiply examples of this type of expression: technical magazines and books are crowded with them, and often they make their way into reputable scientific works. If there is any one place where clarity should prevail it is in

scientific and technological literature. It therefore behooves the student of science and technology to pay the most careful attention to matters of expression.

Expositions, like the other forms of composition, vary in style and tone with the subject under consideration and the audience to which the subject is to be presented. The style and the tone may be literary, scientific, popular, or even unconventional, chatty, and familiar. In every case, however, the exposition should employ only that style, only that tone that will make for the clear, accurate, adequate, and truthful presentation of the subject.

The Tone of Exposition. Expositions should not be dry or uninteresting. They should possess charm and impel reading. How to secure the quality of interestingness is one of the real problems of the writer of expositions. A mere cataloguing of facts and information is not sufficient; a lively interest in the subject matter and a desire to make the material in the composition attractive to the reader are just as essential in exposition as in fiction. No longer do we judge the amount of erudition contained in a book by its dullness. There is no reason why a book of science must be uninteresting to the layman just as there is no reason why a book of history should be dull to the average reader. The writer of an exposition should strive to command his reader's attention so that he will lose himself in the matter presented. And it is possible so to lose oneself in a

book that time flies by unnoticed. In fiction, we travel with the ship *Narcissus* across the Indian Ocean and into the broad Atlantic, or we listen to the guns booming in the early morning hours before Waterloo, or we gaze on the stone face on the mountain, or we follow D'Artagnan and his fellows through one exploit after another, living their experiences with them. Similarly it is possible so to present the life history of a moth or the method by which a chasm may be spanned, or to tell of the wonders of radium or the workings of socialism that the average reader will forget time and its flight in reading of them. Exposition should seek to broaden its appeal, to make its subject matter so attractive that the reader will be compelled by the interest created in the subject to read on to the end without pause. Of such nature are the expositions of David Starr Jordan, of Thomas Huxley, of W. H. George, of Gilbert White.

Diction in Exposition. In matters of diction, exposition has the widest latitude. Although it is often of the highest type of literary expression, at other times it differs materially in matters of diction from what is ordinarily considered literature. Since it is concerned, as has been noted, with all matters of human knowledge, its vocabulary is as broad as the language. When it deals with scientific and technical matters, the words it chooses must be scientific and technical because, for the group of readers for whom it is prepared, the scientific or the technical term is much more concise and meaningful than is

the ordinary, less technical, but more popular term. *Coleopter* and *Lepidopter* carry with them definite denotation to the entomologist as do *Oxycoccus* and *morel* to the botanist. They denote characteristics that the popular terms, beetle, moth, cranberry, and mushroom, do not carry with them. Such a choice of words then is defensible if the audience to whom they are directed is supposed to be acquainted with them. When the audience is not a scientific or a technical one, it becomes necessary not only to use the scientific term but also to provide some explanation to make that term clear to those who hear or read.

The following passage illustrates the method employed when matters of a scientific nature are to be presented to a popular audience.

. . . When we trace the continuous life-history of any plant five functions or physiological activities are observed. The first and most fundamental is *irritability*, which brings each organism into relation to environal stimuli, whether such be heat, light, chemical agents, gravity or electricity. The second is *nutrition* or the capacity to absorb food products and to utilize them. The third is *respiration*, or that action of living tissues which ensures repair and oxygenation of wasted areas. The fourth, or *growth*, is a combined result, up to a certain maximum for each plant, of the activities effected by the preceding agents. The fifth is *reproduction* or multiplication, . . . and that ensures dissemination and perpetuation of each species.

—Dr. J. M. MacFarlane: *University of Pennsylvania Lectures*, 1917–1918

In every instance, words should be chosen because of their values. It is worth while to follow Stevenson's direction to search diligently always until you find that word which exactly expresses the meaning you wish to convey. For the most part, specific words are to be preferred to general terms. Adjectives, among the most useful of our words, must be used with discrimination. One should learn that there is a difference between *pretty* and *attractive*, and between either of these words and *beautiful*. One should learn that *red* is a general term and embraces a vast number of tints; that *carnelian* and *garnet*, *carmine*, *madder*, *scarlet*, and *pink* are only a few of a great many colors that are to be found under the generic name *red*. Verbs should be used so as to convey the exact character of the action that is described. To say that a ship made its way through the water is to give only the most unsatisfactory information. It may sail, steam, rush, skim, drift, or scud. To say that John, chased by a bull, got over the fence to safety does not in any sense picture the mad rush that John made or the ease with which he vaulted the six-bar fence. Verbs are the life of language, and writing that lives will be found filled with verbs that have been chosen with rare discrimination of exact values.

It will be readily apparent from what has been suggested in the preceding paragraph that a careful study of words, of synonyms and antonyms is of inestimable value to the writer of any type of com-

position. It is of especial value to the writer of expositions. A carefully differentiated vocabulary of specific terms, of colorful adjectives and expressive verbs makes for the highest effect and the greatest charm in writing. We are too prone to overwork our scanty vocabularies. The man or woman who finds children, candy, pigs, and jazz music all to be "wonderful" or "exquisite" has no word to describe the triumphs of the airplane or the beauties of the sunset. No one who is not an imbecile or an untutored infant, would, under ordinary circumstances, think of spending five dollars for a ten-cent toy; but many men and women are constantly spending five-dollar words on ten-cent ideas. Similarly, many persons are attempting to buy five-dollar ideas with ten-cent words.

In exposition, especially, it is of the greatest importance to find the exact word for each idea. Truthfulness is served by selecting the word that exactly denotes the idea; accuracy is secured by selecting the word that exactly expresses the shade of meaning intended; and adequacy is accomplished by using the word that exactly conveys the meaning underlying the matter being discussed.

Methods of Investigation. Before any expository writing can be done, the material that is to be included in the finished product must be carefully investigated, either by classifying it according to some specific characteristic or quality, or by making a careful analysis of the entire subject.

1. Classification

Classification, or, as it is sometimes called, Division, consists simply in "the separation of a genus into its constituent species" (Webster), or in the resolution of the parts of a constituent mass. The matter of the relationship of the parts, one to the other or to the mass as a whole, is not of importance in this method of approach. For example, the birds of North America might be divided, perhaps, into birds of prey, herbivorous birds, and insectivorous birds. In each of these classes, certain subdivisions might occur, which subdivisions would be considered in turn. The ordinary college catalogue is a good example of the method of classification applied to a mass of material. It is merely, as the name indicates, a methodically arranged enumeration of the items that go to make up the courses of instruction offered by the college. No attempt is made to show the interrelation of the various parts of the work or the dependence of one branch of study on another. Even the curricula of the various schools that go to make up the college do not attempt to show the coördination or the subordination of the parts of those curricula. The whole volume is merely a setting forth of the parts of the college—or, in terms of exposition, a classification of its parts.

Certain definite rules, which may with profit be quoted here, govern the method of division:

1. The constituent species must exclude each other.
2. The constituent species must be equal, when added together, to the genus.
3. The Division must be founded upon one principle or basis.

—JEVONS: *Lessons in Logic*, p. 105

Under these rules, one may not say, "Houses are divided into bungalows, brick houses, and city houses" or "Sentences are divided into loose sentences, compound sentences, declarative sentences, and short sentences," because in both cases we are dividing different genera of the same family into their species and then trying to make it appear that one or more species of a particular genus are coördinate with one or more species of an entirely different genus. Houses may be divided into city houses and country houses. These in turn may be subdivided into bungalows, cottages, and the like; and each of these groups may be of stone or wood or brick. Similarly, in the case of sentences, we have long sentences and short sentences. A subdivision gives us simple, complex, and compound sentences. These, in turn, may be divided into loose and periodic sentences. Finally we may subdivide all these into declarative, interrogative, and exclamatory sentences.

It is not to be inferred from what has been said on the matter of classification that compositions that are examples of this method are simply bald outlines of material like the college catalogue. In

fact they may be, and often are, extremely readable pieces of literature. We may have very interesting classifications of rugs, of pottery, of cloths, of various species of animals and plants.

The following extract is a good illustration not only of the method of classification but also of the method that is pursued in arriving at a satisfactory scheme of classification:

THE CLASSIFICATION AND NOMENCLATURE OF PLANTS*

The earliest records of the interest of mankind in plants indicate a perception of the fact that they may be placed in groups according to their likenesses and differences. To the ancients the cedar and oak were trees, the briar and bramble were shrubs, and the balm and hyssop, herbs. This recognition of the possibility of orderly arrangement was the beginning of classification. By continued observation the groups become more and more clearly separated and classification naturally arises. As one writer puts it, "a large part of our thinking about living things is bound up with some system of classification." It has long since been evident that this early grouping of plants into trees, shrubs, and herbs is general and inadequate; for we recognize that the plant world includes not only these, but ferns, mosses, seaweeds, molds, mildews, mushrooms, and bacteria. Classifications may vary in accuracy and fullness and our modern attempts may more nearly approximate completeness, but necessity of some means of recognizing and grouping plants had its recognition in the days of Pliny, the Roman naturalist, and Dioscorides, the Greek physician, in the first century of the Christian era.

* From a paper read to the State College Literary Club, State College, Pennsylvania. Used by special permission of the author.

The latter, in a great work on medicinal substances (*Materia Medica*), names six hundred plants, four hundred with descriptions.

While the spirit and purpose of discriminating the various kinds of plants has changed, the fundamental contribution of even the earliest efforts to a more exact knowledge of the plant world is not to be disregarded. One of the earliest interests was the one of medicine, which meant that plants had to be known in detail and classified according to their medicinal properties. In this connection a series of illustrated books printed in Europe between 1470 and 1670, known as *herbals*, are interesting both from botanical and artistic viewpoints, although their chief object was to depict the "virtues" of plants from the medical aspect. Other interests and necessities grew up later, but the great accumulation of information from the studies made primarily for medicinal purposes has served as a basis for other botanical and biological work.

The classification or arrangement of plants in groups may have several aspects. In the recognition of the three classes, trees, shrubs, and herbs, size is the chief factor. In a similar way we might use habitat or place of growth as a basis. We would then be able to distinguish normal land plants (*mesophytes*), living rooted in ordinary soil supplying sufficient moisture to permit good growth of stems and leaves; dry land or desert plants (*xerophytes*), living in very dry places and modified to conserve water; water plants (*hydrophytes*), mostly immersed in water and often with soft or much divided bodies; air plants and climbers (*epiphytes*), growing upon or supported by other plants or objects; strand plants (*halophytes*), living along the coast of salt water; and dependent plants (*parasites* and *saprophytes*), obtaining their food from other organisms, either living or dead. Such a classification is known as an *ecological* one and there is much advantage in study-

ing plants from this point of view of their relation to their environment.

It would be possible to use such purely superficial characters as the color of flowers as a means of grouping plants, and in fact this is sometimes done in popular manuals. Such a system would be purely artificial and would have little value other than permitting one to place the objects of his observations in several classes for convenience. The earlier methods of classifying plants were of this sort. The most famous artificial system is that proposed by Linnaeus, a Swedish botanist, in 1735. He used characters which referred almost exclusively to the flowers. The few plants known to him which did not possess flowers and whose method of reproduction he did not understand were put in one class and collectively called *Cryptogams* (meaning "hidden reproduction"). All others known to reproduce by seeds following the flowers were distinguished as *Phanerogams* (spelled also *Phaenogams* and meaning "evident reproduction"). In the words of one writer "language lags behind ideas" and as "we still speak of the heart as the seat of emotions and of the rising and setting of the sun," so we still use the term *Cryptogam* and *Phanerogam*, although they no longer retain their significance. The complicated methods of reproduction of the now large class of *Cryptogams* are largely understood today, and as a matter of fact the reproductive organs are better developed and more easily accessible than in the *Phanerogams*. Linnaeus subdivided his *Phanerogams* into twenty-three classes, mainly using the stamens (pollen-bearing organs of the flowers) as a basis. In this way, plants, quite unlike, were placed side by side in the same group simply because they happened to possess the same number or condition of stamens.

Such artificial or arbitrary systems were never satisfactory, and Linnaeus himself felt the need of something

better. A natural system, or one expressing "relationships," was early recognized as desirable. Whether we realize it or not we all recognize certain relationships among plants. Our very method of applying common names suggests relations. When we speak of the oaks, the roses, and the clovers, we are placing together forms which we believe closely enough related to be designated by common group names. We assume that those forms which are structurally very similar are, in reality, closely related to one another. This offers a satisfactory basis for the separation of plant life into groups. Although such a natural system necessarily must be imperfect, nevertheless by a thorough knowledge of individual plants it is possible to infer the developments in different divisions and to trace indirectly the connection between one form and another.

This phase of the study of plants which establishes groups is Classification; or, from the fact that it arranges them according to a system, it is called also Systematic Botany. The observation of the facts necessary for classification and their interpretation, or, in other words, the principles of classification, is known as Taxonomy.

In order that plants may be referred to in a definite manner for any purpose, and especially in classifying them, it is necessary that they should have specific names. The whole matter of naming plants is referred to under the term Nomenclature. That the name may indicate something of the systematic standing, it has long been customary to include with the species name a second or group name. This group is known as a genus (adjective form *generic*). The name then is really double, consisting of a generic and a specific part, and is said to be a *binomial*. The binomial system of naming plants was introduced by Linnaeus in 1753 and has been followed ever since. The group or generic name is always written first. In order

that plant names may be uniform in all languages, it is necessary that they be made up from words which are universally understood. To derive the scientific names from the Latin has proved satisfactory. When taken from other languages, Latin terminations are usually given the names. In order that botanical science may make progress, it is necessary to have a regular system for naming plants which is recognized and used by the majority of botanists in all countries. Looking forward to the accomplishment of this end, several Botanical Congresses have been held. A Congress at Genoa, in 1892, appointed a standing committee to constitute an International Commission upon Nomenclature which was to report at some future international congress. The Madison Botanical Congress, called by American botanists at Madison, Wisconsin, in 1893, did not possess the international character which had been hoped for and did not attempt to legislate upon questions of nomenclature. Two later international botanical congresses, one in Vienna in 1905 and one in Brussels in 1910, were chiefly occupied with the formulation of principles, rules, and recommendations for the naming of plants. A congress was scheduled for London in 1915 but was not convened on account of the disturbed conditions resulting from the European war. It is to be hoped that these congresses may be resumed eventually. Several conferences of American botanists have been held and while much headway has been made it must not be inferred that there is general agreement concerning the application of names to plants. Many botanists of high standing are not in accord with some of the present international rules. The trend of recent discussions indicates a feeling that the time is about ripe to try to secure world-wide agreement on the nomenclature of plants.

It is generally recognized that the rules for plant nomen-

clature must not be arbitrary and cannot be imposed by authority. The ideal is to have them simple and founded on considerations so clear and evident that everyone will be able to comprehend them and be inclined to accept them. The main object is to arrive at a point where names will become clear and fixed and where those names which might lead to confusion will be avoided or rejected. The creation of unnecessary names is to be avoided and grammatical correctness and euphony are to be desired. One of the first principles is the one relating to priority, by which the oldest name becomes the valid one in case more than one name has been proposed. Since men in different countries have been proposing names for plants for a great many years without definite rules, it often happens that different names may have been applied to the same plant. The later names are referred to as synonyms. Rules must be designed to put in order the names which the past has bequeathed to us as well as to be a guidance for the future. Enforcing rules in a retroactive way brings about disadvantageous changes, and it is in connection with changes of names which have been in use for many years that difficulties and differences of opinion arise. Some believe in conserving certain names which a strict application of the rules of priority would displace. Sometimes the oldest name is not the one which has been used most widely and some workers advocate that lists of names should be prepared which are to be retained (*nomina conservata*).

There are also two divergent views regarding the manner in which names are applied and established. All agree that names must be published in journals or by the public distribution of printed matter, and accompanied by descriptive accounts. There is a strong feeling on the part of some that a specific name must be applied at the time it is proposed to a particular specimen in hand, which may

be designated as the "type specimen." In other words, we name objects, not our conception of objects. Definite association of a name with a "type" leads into various other differences in views regarding the application of names, especially group names, and there has grown up what may be termed a Type-basis Code. This code has come to be more or less contrasted to the International Code, which has not adopted the type concept. It is to be hoped that the various controversial points may be brought together by sacrifices on both sides so that a universal system may result.

Both generic and specific names are more acceptable if they are in some way descriptive of the plants to which they belong. For example, the generic or group name of the clovers is *Trifolium*, a Latin word meaning "three leaflets." The name of white clover is *Trifolium repens*, the specific part *repens* meaning "creeping" and referring to the habit of the stems. Specific names may also be place names referring to localities where plants were first found or where they are known to be especially abundant. The name of the common red cedar is *Juniperus virginiana*. It was first known to botanists from Virginia. Of course it is also common in many other states; but, according to the rules, the name must remain, even though it should afterward turn out to be somewhat inappropriate. A specific name may be made up from the name of a person who has discovered a species or has been instrumental in calling attention to it. For example, one of the wild asters is named *Aster Tradescantii* in honor of Tradescant, gardener to Charles the First of England. Generic names may also be personal. The genus name of American laurel is *Kalmia*, dedicated to Peter Kalm, a pupil of Linnaeus, who traveled in America. For the most part genera are named with old Latin or Greek names. To make the matter of a plant's designation still more definite

the name of the person who proposed the name of the plant may be included as a third part. If the person's name be a long one and he has named many plants, an abbreviation is used. Thus the complete name of white clover is *Trifolium repens L.*, the capital *L* standing for Linnaeus. Such a name as that of our famous American botanist Gray would be written in full. In practice, the authors' names are frequently omitted, and some advocate their elimination, but there are many circumstances when their citation lends accuracy. If there are two men's names (the first being included in parentheses), it indicates that the one whose name is in parentheses proposed the specific name but placed the species in another group or genus and that the second person is responsible for the change.

To make names of service there must be available somewhere exact descriptions of the plants. Classifying, naming, and describing are inseparably linked together. They involve accurate observation and comparison chiefly of the external parts. For studies of this sort many types of plants may be pressed and dried and permanently preserved by mounting them on paper. If poisoned to prevent insect attacks and stored in suitable cases, they will keep indefinitely. Such a collection of dried plants is called an herbarium. Various devices must be resorted to in the cases of plants which do not lend themselves readily to such treatment.

The elementary classificatory group is the *species*. It consists of individuals which may vary slightly in minor characters but yet so resemble one another that to know one is to know all. In all of the higher plants, the individuals which collectively form the species are capable of indefinite fertile interbreeding. The group of next rank is the *genus*, consisting usually of two or more species which have several features in common. In some in-

stances where a species has sufficiently distinctive characters it may form a genus. The next higher rank, consisting of genera grouped together, is the *family*. The name of the family is taken from some prominent genus and has a Latin termination *aceae*, as *Rosaceae* (from the genus *Rosa*), the rose family. Families are grouped into an alliance known as an *order*, also distinguished by a uniform termination, *ales*, as *Rosales*, the rose order. An order may be a very large group and the various species included within its confines may appear very unlike in a gross way, but a closer examination will reveal certain similar characters indicative of closer relationship with one another than with the species of another order. The *rose* order embraces, aside from the *rose* family, the *apple* and the *pea* families, in which the variations in flower and fruit are obvious and yet that they are more like one another than they are like any members of the *lily* order is almost equally plain. Orders combine to form the next rank, the *class:* classes form *subdivisions*, and these are finally grouped into *divisions* or *subkingdoms*. The division is distinguished by the termination *phyta*, from a Greek word meaning plant. *Spermatophyta* is the name of the division to which seed-bearing plants belong, and the production of seed is the only character which is common throughout the division. A division may be divided directly into classes omitting subdivisions. Extra groups may be interpolated and designated by the prefix *sub:* thus we might have subfamilies, suborders, subgenera, or subspecies. A *subspecies* might be based on variations of color, proportion, or habitat, which are of a minor nature and yet rather definite and uniform. *Races* and *varieties* are also divisions of a species but of less importance than a subspecies. Some cultivated species are broken into varieties by the doubling of the flowers or

into races by the absence of some character, as in beardless wheat.

—Frank D. Kern

The following illustration shows how classification can be made on an entirely different basis:

CLASSIFICATION OF BIRDS

A good ornithologist should be able to distinguish birds by their air as well as by their colors and shape; on the ground as well as on the wing; and in the bush as well as in the hand. For, though it must not be said that every species of birds has a manner peculiar to itself, yet there is somewhat in most genera at least, that at first sight discriminates them, and enables a judicious observer to pronounce upon them with some certainty. . . .

Thus kites and buzzards sail round in circles with wings expanded and motionless; and it is from their gliding manner that the former are still called in the north of England *gleads*, from the Saxon verb *glidan*, to glide. The kestrel, or windhover, has a peculiar mode of hanging in the air in one place, his wings all the while being briskly agitated. Hen-harriers fly low over heaths or fields of corn and beat the ground regularly like a pointer or setting-dog. Owls move in a buoyant manner, as if lighter than air; they seem to want ballast. There is a peculiarity belonging to ravens that must draw the attention even of the most incurious—they spend all their leisure time in striking and cuffing each other on the wing in a kind of playful skirmish; and, when they move from one place to another, frequently turn on their backs with a loud croak, and seem to be falling to the ground. When this odd gesture betides them, they are scratching themselves with one foot, and thus lose the center of gravity. Rooks sometimes dive and tumble in a frolicsome manner;

crows and daws swagger in their walk; woodpeckers fly . . . opening and closing their wings at every stroke, and so are always rising or falling in curves. All of this genus use their tails, which incline downward, as a support while they run up trees. Parrots, like all other hook-clawed birds, walk awkwardly and make use of their bill as a third foot, climbing and descending with ridiculous caution. . . . Magpies and jays flutter with powerless wings, and make no dispatch; herons seem encumbered with too much sail for their light bodies; but these vast hollow wings are necessary in carrying burdens, such as large fishes and the like; pigeons, and particularly the sort called smiters, have a way of clashing their wings the one against the other over their backs with a loud snap; another variety called tumblers, turn themselves over in the air.

—Gilbert White: *The Natural History of Selborne*, letter XXXVII

2. Analysis

At the root of expository writing lies the principle of analysis, for exposition is generally an examination not merely of those superficial qualities that we commonly designate appearances, but it is a searching for all those hidden qualities which serve to differentiate objects one from the other. Analysis in exposition is an ever-present quality.

An analysis is made when an object, a situation, a condition, a theory, a notion, or a class of objects or ideas is examined, their various parts separated out, and the individual relationship of each part to every other part, as well as the relationship of each part to the whole, is made perfectly clear. It makes

no difference how complex the matter may be, a careful analysis makes the whole clear. The making of such an analysis demands certain powers in the analyzer. A knowledge of the entire subject is indispensable; an ability to examine carefully all matters connected with the subject at issue is necessary; an ability to make comparisons and contrasts is essential; and, finally, an ability to arrive at reasonable conclusions regarding the matter presented is absolutely demanded.

A simple chemical analysis may serve to clarify the idea. Water, as we all know, is a colorless liquid. If water is placed in a eudiometer and then subjected to an electric discharge, it will be noticed that some of the water in each arm of the apparatus is replaced by what appears to be air or perhaps gas. Furthermore, we notice that in one of the tubes appears a greater volume of air or gas than is to be found in the other. By examining the graduated scales that are etched on the tubes, we observe that there is twice as much gas in one of the tubes as there is in the other. So far we have made a quantitative analysis. The next step in the analysis is the determination of the nature of these volumes of air or gas found in each arm of the apparatus. Accordingly, we subject the gases to various tests. We endeavor to learn whether each is combustible. Then we try to find out whether each will support combustion in case it proves not to be combustible. We weigh the gases. We test them for this, that,

and the other thing. We find through the medium of these tests that the larger volume is highly combustible, that it is very light in weight, that it is acid, etc. We find that the smaller volume of gas is not combustible, but that combustible materials placed in it glow with unusual brightness and burn with increased rapidity. After we have subjected these gases to all of the tests that we know for gases, we come to the conclusion that we have as the constituent parts of water, hydrogen and oxygen, in the proportion of two of hydrogen to one of oxygen. Consequently, when we wish to express the mixture, water, in chemical language, we call it H_2O.

All the elements that go to make an analysis in any line of work are to be observed in this experiment. We have, first, an examination of the original material: its liquid state, its wetness, its lack of taste, its lack of color. Secondly, we have the breaking down of that material into its constituent parts and a thorough examination of those parts, both with regard to their appearances and their amounts and, finally, with regard to their properties.

All analyses are conducted in exactly the same way. We endeavor to learn all about the original idea or notion that we can learn; then we break that original notion up into its parts, examine each of the parts, and try to find out what relationship the parts bear to each other and to the notion as a whole.

If we were to examine the government of the

United States, we should find not only that it is divided into three distinct parts—the executive, the legislative, and the judicial—but also that these three branches are carefully related one to the other. We should find that there are all sorts of checks and balances imposed on the three branches that make them not three separate and distinct entities but parts of a whole that cannot be divided without losing something essential to the working of our particular form of government. Such an analysis may be carried to such a refinement that all of the activities of our governmental system may be set forth even to the particular duties of the most obscure official in the most out-of-the-way village.

Criticism, which will be examined in detail later, is primarily an exercise in analysis. Criticism presupposes an analytical examination of the subject to be criticized and a forming of a judgment by referring the subject under consideration to certain predetermined standards for comparison and contrast. Further, an expository biography—which, in a manner, is criticism—always demands that the life of the person who is being considered shall be carefully analyzed so that the characteristics and the forces that have determined the course of his life and actions may be ascertained.

Other examples of analysis are to be found in theses and scientific papers where a mass of evidence on a particular subject is carefully sifted, weighed, and evaluated. The preparation of such composi-

tions demands a careful examination of much material and data and an accurate estimation of the value of each item of that material. In argument, before any work can be done in the construction of the argument itself, the facts upon which both sides of the case base their conclusions must be examined and their values estimated. The summing-up speeches of the attorneys in a law suit—in theory, supposed to be expositions of the evidence presented; in fact, arguments or emotional pleas—are excellent, though somewhat biased, examples of what analysis is supposed to be. In such speeches, each bit of evidence is divided out for the benefit of the jury; its relationship to every other bit and to the question as a whole is examined and its bearing on the subject is expounded. I do not have reference here to what is known in criminal cases as "jury stuff," where evidence is set at naught and sentimental pleas are substituted, but rather to those many examples of keen analysis and appraisement that characterized the summaries of the great lawyers of this and other countries. Daniel Webster's address at the conclusion of the Knapp-White case and Thomas Erskine's defense of Lord George Gordon, to mention only two examples, are excellent models of the best manner in legal analysis, as is Judge Benjamin Curtis's charge to the jury in the case of the United States *vs.* James McGlue in 1851. One of the keenest bits of analysis that can be found is also excellent

poetry. In Robert Browning's *The Ring and the Book* is a section entitled "The Pope." It is the summary of the nine books that have been concerned with the evidence and rumor brought to light by a murder charged against a man of noble family in Rome. An appeal has been made to the venerable Pope; and the book in question shows him sitting down, examining and analyzing with care the evidence, and then, on the basis of the law and the fact, making his decision.

Finally it is to be noted that analysis requires a greater grasp of the subject matter than does division. It presupposes, first of all, an intimate acquaintance with the facts connected with the subject under consideration. In analysis, time is saved by making haste slowly. It is important to find out, no matter how long it takes, all that it is possible to find out about the subject before any attempt is made to separate the evidence or to appraise it. In that way one gets a perspective or a point of view and can judge more satisfactorily. The judge hearing a civil case listens first to the evidence and the arguments in their entirety, endeavoring to get the whole matter before him. Then he asks for briefs from the opposing sides. With the briefs and the evidence before him, he is able to make his analysis and arrive at his decision. The justice's decision, as well as the judgment of anyone who is called upon to choose between two

paths, is valuable and true only when a complete, adequate, and unbiased analysis of the facts available has been made.

An excellent example of analysis as applied to a mass of material is to be found in the manner in which Major-General Sir Frederick Maurice dissects the military system of Robert E. Lee in his recent biography of the Southern general. The following extract cuts down to its essentials the rather extended statement of General Maurice and shows clearly the outlines of the analysis.

We find that Lee in his strategy employed three methods, each admirably adapted to the means available and to the political situation at the time. In the *first* period his policy was . . . purely defensive. He was seeking time to prepare the means for bolder courses. . . . In the *second* period he was seeking every opportunity to attack, not merely on the battlefields of Virginia, but in the territory of his enemy. . . . The *third* period of the war . . . dates from the failure at Gettysburg. After that battle Lee saw that the growing power of the North and the increasing determination of its people made it impossible to force them to abandon the struggle by an offensive campaign in the border States . . . Lee's procedure was then, not as in the second period to force a decision by boldness and enterprise, but to avoid decision and to cause delay. The campaign of the Wilderness, of Spotsylvania, and the North Anna is a classical example in military history of how these objects should be sought. In method it was fifty years ahead of the times, and I believe that if the Allies in August, 1914, had applied Lee's tactical methods to the situation which then con-

fronted them the course of the World War would have been changed.

—Quoted in *The New Republic*

The final form in which the results of an analysis or a division of material appears may be either formal or informal. The audience to whom the matter is directed, the nature of the writer or speaker, and the occasion that brings forth the composition are the factors that determine the degree of formality that the finished product will take. In the following pages will be found examples of the various types of expository writing. Whether they be analytical or otherwise, it will be noted that some forms—the familiar essay for example—are essentially informal, and that others—the criticism for example—are essentially formal in character. In all cases, however, the factors mentioned determine the degree of formality that the article attains.

Ways of Presenting Expository Material. In the presentation of expository material, two methods of approach are open to the writer. They may be called the *tearing-down* method and the *building-up* method.

Some expository subjects are best treated by subjecting them first to an examination in their entirety and then by resolving them into their constituent parts. Although it is scarcely fair to call this process of investigation and report a tearing-down process, nevertheless that term goes a long way toward describing what really occurs. I have before me a

volume on the trees of Pennsylvania. As I turn the pages, I find that each family of trees described is preceded by a page or two that sums up the nature and characteristics of the family, its value, and its extent or economic value. Then follows a statement of the nature of the family. Notice the following summary of the characteristics of the oak family:

OAK TREES

Economically this genus is one of the most important among the trees. Its wood is used extensively and is especially adapted for high-grade work. The bark is rich in tannin, while that of a few European species is used for cork. The galls which are caused by insect stings are also often rich in tannin. The nuts are used in some places as food for man and swine and occasionally, when roasted, form a substitute for coffee.

The leaves are alternate, simple, and usually shed in autumn. A division of the Oaks, known as the Evergreen or Live Oaks, sheds the leaves at the end of the second or third season. The flowers, staminate and pistillate, appear on different parts of the same tree and often on different parts of the same branch. The staminate or male flowers are small and arranged singly on a long slender and drooping ament which emerges from the buds on the twigs of the previous year's growth. The pistillate or female flowers are small, inconspicuous, urn-like bodies which appear singly or in groups from the base of the developing leaves of the season. The flowers are fertilized by the wind and develop into a nut-like fruit known as an acorn. The fruit is distinctive in having a scaly, often bristly, cup separated from the thin-shelled nut which it partly or almost wholly encloses. In autumn the nuts may fall to the ground while the cups persist on the tree,

or the nut and cup may fall together. The acorns may germinate immediately on falling to the ground, but usually they remain dormant until the following spring.

—J. S. Illick: *Pennsylvania Trees*

These statements are followed by accounts of each of the individual kinds of oak found in Pennsylvania. In these statements are descriptions of the form, bark, twigs, buds, leaves, flowers, fruit, and such other characteristics as may serve to distinguish one species of the oak family from the others.

Practically every expository subject can be treated in this way. After the matter as a whole has been made clear, the constituent parts are examined and described. So, for example, the total impression that a man makes on you may be shown, and this may be followed by a study of the factors that go to make up that impression. The nature of a machine may be set forth, and then the form and the nature of its working parts explained. The general construction given to a word may be stated and then its various connotations and the false and true interpretations that have been given to it may be expounded.

Suppose that, instead of pursuing the method outlined above, Professor Illick had presented first the individual species, examined them, and noted their characteristics. He would have ascertained that, although each species has certain characteristics that set it apart from every other species,

nevertheless each of these species possesses characteristics that are common to all of them. The summing up of these qualities after the investigations of the individual species had been made would be an exposition of the family by a building-up process. By this method, we arrive at a knowledge of generalized principles or characteristics through a thorough investigation of individual examples.

In both cases, the purposes of exposition are served only when the results are stated clearly in a readable form.

EXERCISES

I. Examine carefully the following selections and determine which are exposition, which are narration, which are description, and which are argument. Point out in each case the way in which the result sought is attained. Explain the method by which the thought is developed.

But now, in this Valley of *Humiliation*, poor Christian was hard put to it; for he had gone but a little way, before he espied a foul *Fiend* coming over the field to meet him; his name is *Apollyon*. Then did Christian begin to be afraid, and to cast in his mind whether to go back or to stand his ground: But he considered again that he had no Armor for his back, and therefore thought that to turn the back to him might give him the greater advantage with ease to pierce him with his Darts. Therefore he resolved to venture and stand his ground; "For," thought he, "had I no more in mine eye than the saving of my life, 'twould be the best way to stand."

—John Bunyan: *Pilgrim's Progress*

THE SEVENTH INNING

It is a simple ceremonial, but impressive, like all manifestations of the soul of the multitude. I need only close my eyes to call up the picture vividly: It is a day of brilliant sunshine and a great crowd of men is seated in the open air, a crowd made up of all conditions, ages, races, temperaments, and states of mind. The crowd has sat there for an hour or more, while the afternoon sun has slanted deeper into the west and the shadows have crept across greensward and hard-baked clay to the eastern horizon. Then almost with a single motion—the time may be somewhere between four-thirty and five o'clock—this multitude of divers minds and tempers rises to its feet and stands silent, while one might count twenty perhaps. Nothing is said; no high priest intones prayer for this vast congregation; nevertheless the impulse of ten thousand hearts is obviously focused into a single desire. When you have counted twenty the crowd sinks back to the benches. A half minute at most and the rite is over.

—Simeon Strunsky: *The Game*

The method of scientific investigation is nothing but the expression of the necessary mode of working of the human mind. It is simply the mode by which all phenomena are reasoned about, rendered precise and exact. There is no more difference, but there is just the same kind of difference, between the mental operations of a man of science and those of an ordinary person, as there is between the methods and operations of a baker or of a butcher, weighing out his goods in common scales, and the operations of a chemist in performing a difficult and complex analysis by means of his balance and finely graduated weights. It is not that the action of the scales in the one case, and the balance in the other, differ in the principles

of their construction or manner of working; but the beam of one is set on an infinitely finer axis than the other, and of course turns by the addition of a much smaller weight.

—Thomas Huxley: *Method of Scientific Investigation*

Methinks I see him before me now, as he appeared then, and as he continued with scarcely any perceptible alteration to me, during the twenty years intimacy which followed and were closed by his death. A light frame, so fragile that it seemed as if a breath would overthrow it, clad in clerk-like black, was surmounted by a head of form and expression the most noble and sweet. His black hair curled crisply about an expanded forehead; his eyes, softly brown,. twinkled with varying expression, though the prevalent feeling was sad; and the nose, slightly curved and delicately carved at the nostril, with the lower outline of the face regularly oval, completed a head which was finely placed on the shoulders, and gave importance and even dignity to a diminutive and shadowy stem. Who shall describe his countenance, catch its quivering sweetness, and fix it forever in words? There are none, alas, to answer the vain desire of friendship. Deep thought, striving with humor; the lines of suffering wreathed into cordial mirth; and a smile of painful sweetness, present an image to the mind which it can as little describe as lose. His personal appearance and manner are not unfitly characterized by what he himself says in one of his letters to Manning, of Braham, "a compound of the Jew, the gentleman, and the angel."

—Thomas Noon Talfourd: "Charles Lamb's Portrait." Quoted in Alfred Ainger's *Charles Lamb*

How, then, did the military get jurisdiction in Indiana? All men who hold the attorney general's opinion to be true, answer the question I have put by saying that the

military jurisdiction comes from the mere existence of war; and it comes in Indiana only as a legal result of a war which is going on in Mississippi, Tennessee, or South Carolina. The constitution is repealed, or its operation suspended, in one state because there is war in another. The courts are open, the organization of society is intact, the judges are on the bench, and their process is not impeded; but their jurisdiction is gone. Why? Because, say our opponents, war exists, and the silent, legal, technical operation of that fact is to deprive all American citizens of their right to a fair trial. That class of jurists and statesmen who hold that the trial by jury is lost to the citizen during the existence of war carry out their doctrine theoretically and practically to its ultimate consequences. The right of trial by jury being gone, all other rights are gone with it; therefore a man may be arrested without accusation and kept in prison during the pleasure of his captors; his papers may be searched without a warrant; his property may be confiscated behind his back, and he has no earthly means of redress—nay, an attempt to get a just remedy is construed as a new crime. He dare not even complain, for the right of free speech is gone with the rest of his rights. If you sanction that doctrine, what is to be the consequence? I do not speak of what is past and gone; but, in case of a future war, what results will follow from your decision indorsing the attorney general's views? They are very obvious. At the instant when the war begins, our whole system of legal government will tumble into ruin, and, if we are not all robbed and kidnapped, and hanged, and drawn, and quartered, we will owe our immunity, not to the constitution and laws but to the mere mercy or policy of those persons who may then happen to control the organized physical force of the country.

—Jeremiah S. Black: *The Right to Trial by Jury*, 1866

One of the most delightful bird sounds or noises to be heard in England is the concert singing of a flock of several hundreds, and sometimes of a thousand or more, linnets in September and October and even later in the year, before these great congregations have been broken up or have migrated. The linnet has a little twittering song with breaks in it and small chirping sounds, and when a great multitude of birds sing together the sound at a distance of fifty or sixty yards is as of a high wind among the trees, but on a nearer approach the mass of sound resolves itself into a tangle of thousands of individual sounds, resembling that of a great concourse of starlings at roosting time but more musical in character. It is as if hundreds of fairy minstrels were playing on stringed and wind instruments of various forms, everyone intent on his own performance without regard to the others.

—W. H. Hudson: *Far Away and Long Ago*

Such we believe to have been the character of the Puritans. We perceive the absurdity of their manners. We dislike the sullen gloom of their domestic habits. We acknowledge that the tone of their minds was often injured by straining after things too high for mortal reach: and we know that, in spite of their hatred of Popery, they too often fell into the worst vices of that bad system, intolerance and extravagant austerity; that they had their anchorites and their crusades, their Dunstans and their De Montforts, their Dominics and their Escobars. Yet, when all circumstances are taken into consideration, we do not hesitate to pronounce them a brave, a wise, an honest, and a useful body.

—Thomas Babington Macaulay: *Milton*

A three-quarter moon is coming up, hangs now over Palestine, and Port Said, the ancient Pelusium, takes on a serene splendor inconceivable to those who have seen

her only in the hard dusty glare of noonday. The harsh outlines of the ships soften to vague shadows touched with silver; the profound gloom within the colonnades of the Canal building, the sheen of the moonlight on green domes and gray stucco walls makes of it a fairy palace of mist and emerald. Each motor launch speeding past leaves a broadening, heaving furrow of phosphorescence. Each dip of our oars breaks the dark water into an incredible swirl of boiling greenish-white radiance.

—William McFee: *A Port Said Miscellany*

Worms have played a more important part in the history of the world than most persons would at first suppose. In almost all humid countries they are extraordinarily numerous and for their size possess great muscular power. In many parts of England a weight of more than ten tons of dry earth annually passes through their bodies and is brought to the surface on each acre of land, so that the whole superficial bed of vegetable mold passes through their bodies in the course of every few years. From the collapsing of the old burrows the mold is in constant though slow movement, and the particles composing it are thus rubbed together. By these means fresh surfaces are continually exposed to the action of the carbonic acid in the soil, and of the humus-acids which appear to be still more efficient in the decomposition of rocks. The generation of the humus-acids is probably hastened during the digestion of the many half-decayed leaves which worms consume. Thus the particles of earth, forming the superficial mold, are subjected to conditions eminently favorable for their decomposition and disintegration. Moreover, the particles of the softer rocks suffer some amount of mechanical trituration in the muscular gizzards of worms, in which small stones serve as millstones.

—Charles Darwin: *Formation of Vegetable Mold*

II. Select from a current magazine or book paragraphs of about the length of those quoted above that will illustrate the four types of writing. Be sure that you are able to justify your designation of each paragraph.

III. Make an outline for a classification of one of the following subjects. Consult first the Appendix on pages 364 and 365, for information regarding the manner in which the various items in an outline are to be designated.

Engines	Pumps
Batteries	Bridges
Weapons for Defense	News Items
Sources of English Words	Causes of War
The Students at —— College	Kinds of Slang

Remember that, in making a classification, only one basis of classification should be employed at a time. You cannot, for example, divide books into octavos, quartos, Bibles, and novels.

IV. Write a theme of about four hundred words, putting into readable form the classification that you have just made in outline.

V. Outline and then expand an analysis of one of the following subjects. Remember that an analysis is much more complete than a classification and that it considers the interrelation of the parts of the subject.

Causes of the Great War
The Organization of —— College

The Nature of the Government of ——
City (or town or state)
The Organization of the Bank
The Way Business is Administered
The Organization of a City Newspaper

CHAPTER II

Summaries

The simplest of the expository types, because they are the least original, are called summaries. Such exercises require no effort in the arrangement of the material, for in the article that is summarized the arrangement has already been made; nor do they need any proportioning, for that, too, has been done in the original article. Summaries are always a making over of the work of another. In this restatement or condensation care should be taken that the resulting composition shall be readable, simpler than the original, and, at the same time, preserve those qualities that make the original valuable. Summaries may be in the form of abstracts, notes, or reviews.

The Abstract. Under various designations we find the abstract in literature and in scientific writings. It may be a brief, an outline, an epitome, or a synopsis. Whatever it is called, it possesses certain well-defined characteristics. In it, the character, the general construction, the point of view, and the object of the original article must be preserved. It is merely an exercise in condensation. It may contain verbatim extracts from the original.

It may vary in size from a sentence or two to an article of several pages. Whatever the size, it must be merely a reflection of the work of another and must not contain any opinion or criticism of the article that is being summarized.

Since the abstract seeks to preserve the spirit and method of the original, the writer should carefully observe the following rules:

1. The entire article or book should be read through carefully in order to get the spirit and the central idea of its author.
2. The book or article should then be analyzed in order to ascertain which are the principal ideas and which are the subordinate ones.
3. The abstract should be written not only with the idea of preserving the spirit and proportion of the original, but also with the intent of being readable. In this way only is it possible for the reader of the abstract to get a satisfactory idea of the substance of the original.
4. Finally, it is absolutely essential that the writer of the abstract efface himself and his own personality from his writing. Since he is merely the mouthpiece of another, none of his own characteristics should be evident.

The following extract from the English Association Bulletin for June, 1914, conveys the ideas that Mr. Hayes had of Francis Thompson, the poet, as those ideas were presented in his lecture before the English Association:

On February 10, Mr. Alfred Hayes, Principal of the Midland Institute, lectured on Francis Thompson, whose

poems were a true biography, a self-revelation unparalleled in English literature, "their very essence distilled from the winepress of suffering." An abnormal capacity for pain led his footsteps astray, but he never ceased to struggle for sanctity. The architecture of his verse was Gothic rather than Classic, and of the Decorated and Flamboyant order. Had the circumstance of his life been other, he might have developed a style in which fervor and control were nobly reconciled. His simplest work was probably his best, and some of it will be imperishable. Thompson's style was often extravagant, but his literary judgments were sober and restrained. His poetry was esoteric in its appeal, and of the temple and the sanctuary.

A similar type of abstract often appears in learned magazines where the results of investigations, too long for complete publication in the magazine, are given in abstract for the information of its readers. In this way the scholar, interested in a particular field of research, can keep track of the work that is being accomplished by other investigators in that same field. The following extracts are of this type. They illustrate clearly the nature and the value of this kind of exposition.

423. Electric Signals for Guiding Ships. R. H. Marriott. (Rev. Gen. d'El. 7. pp. 127–129, Jan. 24, 1920.)

In this article a method for guiding ships in foggy weather through narrow channels, harbors, etc., is described. The method consists essentially in feeding with alternating current submarine cables or cables laid in air along the piers and in observing on board ship the positions of said cables by aid of frames connected to telephones. The frame can be rotated around an axis parallel to the fore-and-aft line

of the ship, so that it can be ascertained if the cable is "starboard" or "port" of the ship. A number of suggestions as to the best manner of installing the cables, the frequencies to be adopted, etc., are given. Reports of experiments are reported, and show the reliability of the new method.

—E. Bellini, D.Sc.: *Science Abstracts*, 1924

EFFECT OF WATER CONTAINING FREE CHLORINE IN BREAD

Baking tests indicate that the presence of free chlorine in water to the extent of 5 to 10 parts per million does not appear to have a deleterious effect on bread quality. The use of five parts per million of chlorine in water used for the determination of the fermentation power of fresh yeast by the Hayduck and Meissl methods did not appear to decrease the rate or total volume of gas evolved in comparison with tests made at the same time and under the same conditions in which no free chlorine gas was present.

—C. B. Morrison: *Cereal Chemistry*. Quoted in *American Chemical Society Abstracts*

COMMERCIAL FERTILIZERS *vs.* STABLE MANURE

The results of eight years' experiments in the use of manure at the rate of 4 tons per acre on corn in a 4-year rotation of corn, oats, wheat, and clover in comparison with an equivalent amount of plant nutrients in commercial fertilizers made up of sodium nitrate, acid phosphate, and potassium chloride are briefly reported. The commercial fertilizers exceeded the manure in the value of increase in all cases, giving 24.3 per cent larger return in the case of manure alone and 11.7 per cent when acid phosphate was added.

—From Ohio Station Bulletin 373. Quoted in *American Chemical Society Abstracts*

EXERCISES

I. Read a scientific article in one of the scientific magazines or in a text on a scientific or technical subject. Make an abstract of about one hundred words. It is to be remembered that an abstract should give the reader a general idea at least of the scope and the material of the original article.

II. Examine any one of the longer essays reprinted in this book and write an abstract of one hundred words on the material it contains.

The Paraphrase. The paraphrase, although it is not so definitely a summary as the abstract, approaches it closely. A paraphrase is a free rendering of the thoughts and words of another for purposes of explanation. It ordinarily consists in putting into simpler language and into different and better-known words the exact thought of the selection or book under consideration. It requires, therefore, more than a mere restatement of the material contained in the work to be paraphrased; it requires a certain amount of interpretative skill as well.

The paraphrase, possibly more than any other form, needs to be adapted to the persons for whom it is prepared. Since its primary object is to simplify an otherwise difficult passage and to render it more understandable to a particular audience, the mentality of that audience must be borne in mind. A paraphrase for children must be couched in different

terms from that prepared for adults, that written for persons in one walk of life must of necessity be different from that written for those in another.

A paraphrase differs from an abstract or a report in that it is, generally but not always, an amplification rather than a condensation of the original. Unknown words must be explained, synonyms must be chosen for unusual words, and new ideas must be made plain. Translation, which seeks to make clear the thought of another who has written in a foreign language, is a rather close rendering of the meaning of the thought and words of another; paraphrasing is a free rendering of the thought and words. We say that we translate from Latin into English. Eugene Field illustrated the difference between the translation and the paraphrase in those renditions of the *Odes of Horace* for which he is justly praised. After having given his readers a rather faithful rendering of an ode, he paraphrased it so that it would be plainer to the ordinary reader.

The paraphrase may be in prose or in verse. This fact is frequently lost sight of. The Psalms, for example, have often been paraphrased, one of the most notable examples being found in the old Presbyterian *Hymnal and Psalm Book*. Here an attempt, though not a particularly successful one, has been made to render the old Hebrew songs into English verse. The following selection from the Twenty-third Psalm is a fair example. Notice the difference between the first three verses from the

authorized version of the Bible and the same verses from the Psalm Book paraphrase.

The Lord is my Shepherd; I shall not want.
He maketh me to lie down in green pastures: he leadeth me beside the still waters.
He restoreth my soul: he leadeth me in the paths of righteousness for his name's sake.

The paraphrase, in three stanzas, follows:

My Shepherd is the living Lord:
Now shall my wants be well supplied;
His providence and holy word
Become my safety and my guide.

In pastures where salvation grows
He makes me feed, He makes me rest;
There living water gently flows,
And all the food's divinely blest.

My wandering feet his ways mistake;
But He restores my soul to peace,
And leads me for his mercy's sake,
In the fair paths of righteousness.

Carried to a much greater extent, the beautiful story called *The Song of the Syrian Guest* combines paraphrase and interpretation of this same Psalm.

Poetry is most often the subject for paraphrase, because the sometimes involved method of expression used by the poet needs to be straightened out for the casual reader and put into prose so that he may understand it. The following two passages are fair

examples of the kind of verse that needs paraphrase and the kind of paraphrase that we find.

> But the Sensitive Plant, which could give small fruit
> Of the love which it felt from the leaf to the root,
> Received more than all, it loved more than ever,
> Where none wanted but it, could belong to the giver;
>
> For the Sensitive Plant has no bright flower;
> Radiance and odor are not its dower;
> It loves, even like Love, its deep heart full;
> It desires what it has not, the Beautiful.
>
> —SHELLEY: "The Sensitive Plant"

The Sensitive Plant, unable to reveal its love, like other flowers, in blossoms of beauty and fragrance, nevertheless on that account was more strongly dowered than they, since the love it so strongly felt but could not express, having no outlet, struck into the "deep heart" of the plant itself and expended all its power in gracing and purifying that heart.

EXERCISE

Select a sonnet or a longer passage from the works of some standard author and put the matter that it contains in your own words. Endeavor as far as possible to give your paraphrase some individuality. Do not make it a mere parroting of the original, in which synonyms are substituted for the words of the poems and in which the whole effect is stilted and uninteresting.

Interpretation. Sometimes the thought underlying a piece of writing or notion needs more detailed explanation than the paraphrase provides. Because more definiteness is required to make the meaning clear, the writer cannot trust to the inference that may be made from the paraphrase. Explanations may be necessary because some of the words are obsolete, or are technical, or are used in an unusual sense; because the thought is somewhat involved; or because the subject is a most unusual one. When any one of these contingencies arise, what is known as Interpretation is necessary.

All interpretations should always be dominated by the thought of the original. It is the duty of the writer of an interpretation to put himself in the place of the author and be his mouthpiece, offering such explanations of the matter at hand as he believes the author himself would offer were he to be questioned about it. Like the actor or the musician, the writer of an interpretation must seek to know the author's or the composer's intent and try to make that intent clear to the reader or auditor.

It is not to be understood that in interpretations the personality of the interpreter is to be completely eliminated. Gleaming through the explanation should be something of the spirit and intellect of the person who is responsible for it. It should never be a mere parroting of the ideas that were originally presented. The writer of the interpretation should add something to the original. The actor, in reality

an interpreter of the dramatist, often makes an otherwise unimportant part a work of art by the way in which he injects his personality and his art into it. So the master musician often sees in a combination of notes that hidden idea which is unobserved by the amateur and, by his playing, makes them ring out the message that was felt by the composer or perhaps only dimly sensed by him. So, in literary interpretation, often the critic sees in the production of the author that meaning that the author was groping for and, by his interpretation, makes it live for his reader.

One cannot consider the interpretation without taking into consideration the way in which the form shows itself when it is applied to the other arts. In music, two ways are open to the interpreter: (1) he may explain in ordinary language the ideas and the meaning of the composer; or (2) he may strive to make clear the meaning by actually playing the music. The explanations that appear on the program of a symphony concert are miniature interpretations. The lecturer on music is often the same sort of interpreter. The second method, however, is the more common. Not only does the virtuoso, the soloist, or the director strive to play the notes correctly, but he also endeavors to convey the thought that was in the mind of the composer when he wrote the music. The passion of love may throb in the voice of the singer or quaver in the tones of the violin; the depth of despair may sob in the notes

of the cello; or the glory of battle and the marching of triumphant armies may thunder out through the glorious harmonies of the full orchestra. All of these effects come not by merely playing the notes but by a keen appreciation of the feelings and thoughts of the composer when he put the notes on paper. Listen, if you will, to two singers singing "Annie Laurie." One of them will sing the stanza,

> Her brow was like the snaw drift,
> Her throat was like the swan,
> Her face it was the fairest
> That ere the sun shone on;
> That ere the sun shone on,
> And dark blue was her ee,
> And for Bonnie Annie Laurie,
> I'd lay me doon and dee.

as though it were only words, meaningless and inane; the other, so that, as you listen, the girl herself rises before you, and you feel the throb of love that beats in the words, and rapture and joy and eternal admiration gather and force themselves on you. The second interpreter makes real the sentiment suggested in Keats's "Ode on a Grecian Urn":

> Bold Lover, never, never canst thou kiss,
> Though winning near the goal—yet, do not grieve;
> She cannot fade, though thou hast not thy bliss,
> Forever wilt thou love, and she be fair!

When the amateur with the thin, sweet voice and the scrawny figure "renders" the marvelous

"Habanera" from *Carmen*, music and words become so insipid they almost nauseate you. What Don José would ever be attracted by such a performance or such a performer? But when an artiste like Calvé or Farrar sings that song, the music pulsates, the words take on new meanings, and behold! the Spanish cigarette girl is flirting before you. In each note is a new resonance, in each phrase is a new intonation. The words are enunciated with a biting lilt to them; there are quips and quirks and dulcet sounds, and the Carmen that Bizet saw wraps her shawl about her and snaps her fingers in your face.

In reading, similar results are to be noticed. Have you ever listened to the reading of a poem or a bit of impassioned prose by one who has studied the work of a great literary master and whose voice is carefully attuned so that it reflects the cadences of the verse or the sonorousness of the prose and carries with it the passion of the words? The very pulses of your body beat faster as you recognize that here are no meaningless words but rather real life speaking to your life. Whoever has heard a great actor read Hamlet's soliloquy, "To be or not to be," and then has gone home and tried himself to read it aloud, will realize at once how much of the meaning of those pregnant words can be conveyed by the tones, inflection, and pauses of speech.

In music and reading, then, interpretation is a matter of understanding, feeling, and technique;

in writing, it is understanding, feeling, diction, and arrangement.

In painting, sculpture, and architecture, also, are many things to interpret to the uninitiated. In the following passage, John Ruskin seeks to make plain the thought that the artist sought to convey in a picture.

THE OLD SHEPHERD'S CHIEF MOURNER

Speaking with strict propriety, therefore, we should call a man a great painter only as he excelled in precision and force in the language of lines, and a great versifier, as he excelled in precision or force in the language of words. A great poet would then be a term strictly, and in precisely the same sense applicable to both, if warranted by the character of the images or thoughts which each in their respective languages conveyed.

Take, for instance, one of the most perfect poems or pictures (I used the words as synonymous) which modern times have seen: "The Old Shepherd's Chief Mourner." Here the exquisite execution of the glossy and crisp hair of the dog, the bright sharp touching of the green bough beside it, the clear painting of the wood of the coffin and the folds of the blanket, are language—language clear and expressive in the highest degree. But the close pressure of the dog's breast against the wood, the convulsive clinging of the paws, which has dragged the blanket off the trestle, the total powerlessness of the head laid, close and motionless, upon its folds, the fixed and tearful fall of the eye in its utter hopelessness, the rigidity of repose which marks that there has been no motion nor change in the trance of agony since the last blow was struck on the coffin-lid, the quietness and gloom of the chamber, the

spectacles marking the place where the Bible was last closed, indicating how lonely has been the life, how unwatched the departure of him who is now laid solitary in his sleep; these are all thoughts—thoughts by which the picture is separated at once from hundreds of equal merit, as far as mere painting goes, by which it ranks as a work of high art, and stamps its author, not as the neat imitator of the texture of a skin, or the fold of a drapery, but as a Man of Mind.

—John Ruskin: *Modern Painters*

Another passage from Ruskin shows the method of interpretation applied to architecture. In *Stones of Venice*, he discusses in detail the elements of Gothic Architecture. By this means he interprets "Universal Gothic" in all its ramifications. The excerpt that follows ends with his setting forth of but one of the elements of this type of architecture, but serves nevertheless to show the method he pursued.

ON THE NATURE OF THE GOTHIC

. . . I shall endeavor therefore to give the reader in this chapter an idea, at once broad and definite, of the true nature of Gothic architecture, properly so called; not of that of Venice only, but of universal Gothic: for it will be one of the most interesting parts of our subsequent inquiry to find out how far Venetian architecture reached the universal or perfect type of Gothic, and how far it either fell short of it, or assumed foreign and independent forms.

The principal difficulty in doing this arises from the fact that every building of the Gothic period differs in

some important respect from every other; and many include features which, if they occurred in other buildings, would not be considered Gothic at all; so that all we have to reason upon is merely, if I may be allowed to express it, a greater or less degree of *Gothicness* in each building we examine. And it is this Gothicness—the character which, according as it is found more or less in a building, makes it more or less Gothic—of which I want to define the nature; and I feel the same kind of difficulty in doing so which would be encountered by anyone who undertook to explain, for instance, the nature of Redness, without any actually red thing to point to, but only orange and purple things. Suppose he had only a piece of heather and a dead oak leaf to do it with. He might say, the color which is mixed with yellow in this oak leaf, and with the blue in this heather, would be red, if you had it separate; but it would be difficult, nevertheless, to make the abstraction perfectly intelligible: and it is so in a far greater degree to make the abstraction of the Gothic character intelligible, because that character itself is made up of many mingled ideas, and can consist only in their union. That is to say, pointed arches do not constitute Gothic, nor vaulted roofs, nor flying buttresses, nor grotesque sculptures; but all or some of these things, and many other things with them, when they come together so as to have life.

Observe also, that, in the definition proposed, I shall only endeavor to analyze the idea which I suppose already to exist in the reader's mind. We all have some notion, most of us a very determined one, of the meaning of the term Gothic; but I know that many persons have this idea in their minds without being able to define it: that is to say, understanding generally that Westminster Abbey is Gothic, and St. Paul's is not, that Strasburg Cathedral is Gothic, and St. Peter's is not, they have, nevertheless,

no clear notion of what it is that they recognize in the one or miss in the other, such as would enable them to say how far the work at Westminster or Strasburg is good and pure of its kind: still less to say of any nondescript building, like St. James's Palace or Windsor Castle, how much right Gothic element there is in it, and how much wanting. And I believe this inquiry to be a pleasant and profitable one; and that there will be found something more than usually interesting in tracing out this gray, shadowy, many-pinnacled image of the Gothic spirit within us; and discerning what fellowship there is between it and our northern hearts. And if, at any point of the inquiry, I should interfere with any of the reader's previously formed conceptions, and use the term Gothic in any sense which he would not willingly attach to it, I do not ask him to accept, but only to examine and understand, my interpretation, as necessary to the intelligibility of what follows in the rest of the work.

We have, then, the Gothic character submitted to our analysis, just as the rough mineral is submitted to that of the chemist, entangled with many other foreign substances, itself perhaps in no place pure, or ever to be obtained or seen in purity for more than an instant; but nevertheless a thing of definite and separate nature, however inextricable or confused in appearance. Now observe: the chemist defines his mineral by two separate kinds of character; one external, its crystalline form, hardness, luster, etc.; the other internal, the proportions and nature of its constituent atoms. Exactly in the same manner, we shall find that Gothic architecture has external forms, and internal elements. Its elements are certain mental tendencies of the builders, legibly expressed in it; as fancifulness, love of variety, love of richness, and such others. Its external forms are pointed arches, vaulted roofs, etc. And unless both the elements and the forms are there,

we have no right to call the style Gothic. It is not enough that it has the Form, if it have not also the power and the life. It is not enough that it has the Power, if it have not the Form. We must therefore inquire into each of these characters successively; and determine first, what is the Mental Expression, and secondly, what the Material Form of Gothic architecture, properly so called.

Mental Power or Expression. What characters, we have to discover, did the Gothic builders love, or instinctively express in their work, as distinguished from all other builders?

Let us go back for a moment to our chemistry, and note that, in defining a mineral by its constituent parts, it is not one nor another of them that can make up the mineral, but the union of all: for instance, it is neither in charcoal, nor in oxygen, nor in lime, that there is the making of chalk, but in the combination of all three in certain measures; they are all found in very different things from chalk, and there is nothing like chalk either in charcoal or in oxygen, but they are nevertheless necessary to its existence.

So in the various mental characters which make up the soul of Gothic. It is not one nor another that produces it; but their union in certain measures. Each one of them is found in many other architectures besides Gothic; but Gothic cannot exist where they are not found, or, at least, where their place is not in some way supplied. Only there is this great difference between the composition of the mineral, and of the architectural style, that if we withdraw one of the elements from the stone, its form is utterly changed, and its existence as such and such a mineral is destroyed; but if we withdraw one of its mental elements from the Gothic style, it is only a little less Gothic than it was before, and the union of two or three of its elements is enough already to bestow a certain Gothicness of char-

acter, which gains in intensity as we add others, and loses as we again withdraw them.

I believe, then, that the characteristic or moral elements of Gothic are the following; placed in the order of their importance:

1. Savageness
2. Changefulness
3. Naturalism
4. Grotesqueness
5. Rigidity
6. Redundance

These characters are here expressed as belonging to the building; as belonging to the builder, they would be expressed thus: 1. Savageness, or Rudeness. 2. Love of Change. 3. Love of Nature. 4. Disturbed Imagination. 5. Obstinacy. 6. Generosity. And I repeat, that the withdrawal of any one, or any two, will not at once destroy the Gothic character of the building, but the removal of the majority of them will. I shall proceed to examine them in their order.

1. Savageness. I am not sure when the word "Gothic" was first generally applied to the architecture of the North; but I presume that, whatever the date of its original usage, it was intended to imply reproach, and express the barbaric character of the nations among whom that architecture arose. It never implied that they were literally of Gothic lineage, far less that their architecture had been originally invented by the Goths themselves; but it did imply that they and their buildings together exhibited a degree of sternness and rudeness, which, in contradistinction to the character of the southern and eastern nations, appeared like a perpetual reflection of the contrast between the Goth and the Roman in their first encounter. And when that fallen Roman, in the utmost impotence of his

luxury, and insolence of his guilt, became the model for the imitation of civilized Europe, at the close of the so-called Dark Ages, the word Gothic became a term of unmitigated contempt, not unmixed with aversion. From that contempt, by the exertion of the antiquaries and architects of this century, Gothic architecture has been sufficiently vindicated; and perhaps some among us, in our admiration of the magnificent science of its structure, and sacredness of its expression, might desire that the term of ancient reproach should be withdrawn, and some other, of more apparent honorableness, adopted in its place. There is no chance, as there is no need, of such a substitution. As far as the epithet was used scornfully, it was used falsely; but there is no reproach in the word, rightly understood; on the contrary, there is a profound truth, which the instinct of mankind almost unconsciously recognizes. It is true, greatly and deeply true, that the architecture of the North is rude and wild; but it is not true, that, for this reason, we are to condemn it, or despise. Far otherwise: I believe it is in this very character that it deserves our profoundest reverence.

After a long paragraph in which the plants and animal life of the regions on either side of the Alps are contrasted, Ruskin continues:

. . . Let us watch him [the artisan of the Goths] with reverence as he sets side by side the burning gems, and smoothes with soft sculpture the jasper pillars, that are to reflect a ceaseless sunshine, and rise into a cloudless sky: but not with less reverence let us stand by him, when, with rough strength and hurried stroke, he smites an uncouth animation out of the rocks which he has torn from among the moss of the moorland, and heaves into the darkened air the pile of iron buttress and rugged wall,

instinct with the work of an imagination as wild and wayward as the northern sea; creations of ungainly shape and rigid limb, but full of wolfish life; fierce as the winds that beat, and changeful as the clouds that shade them.

There is, I repeat, no degradation, no reproach in this, but all dignity and honorableness; and we should err grievously in refusing either to recognize as an essential character of the existing architecture of the North, or to admit as a desirable character in that which it yet may be, this wildness of thought, and roughness of work; this look of mountain brotherhood between the cathedral and the Alp; this magnificence of sturdy power, put forth only the more energetically because the fine finger-touch was chilled away by the frosty wind, and the eye dimmed by the moor-mist, or blinded by the hail; this outspeaking of the strong spirit of men who may not gather redundant fruitage from the earth, nor bask in dreamy benignity of sunshine, but must break the rock for bread, and cleave the forest for fire, and show, even in what they did for their delight, some of the hard habits of the arm and heart that grew on them as they swung the axe or pressed the plough.

—John Ruskin: *Stones of Venice*

Sometimes, too, an action, that is somewhat out of the ordinary, needs to be explained or interpreted. A person usually accustomed to kindliness of action suddenly develops a penchant for doing the most irritating things. Those who know him seek to learn the reason for his actions; and an explanation or an interpretation of his actions may result. Or a legislator, who has always been counted on by his constituents or his party to follow orders, suddenly does the unexpected thing and votes contrary to

all expectations. Often, under these circumstances, in order that his action may be perfectly understood he rises at the time of his vote and explains it. The *Congressional Record* is filled with such explanations or interpretations of actions.

The extract from Thoreau which follows is an illustration of the kind of explanation that is sometimes made by one who adopts an attitude that seems to be at variance with the common practice:

FISHING AND FISHES

I have found repeatedly, of late years, that I cannot fish without falling a little in self-respect. I have tried it again and again. I have skill at it, and, like many of my fellows, a certain instinct for it, which revives from time to time; but always when I have done I feel that it would have been better if I had not fished. I think that I do not mistake. It is a faint intimation, yet so are the first streaks of morning. There is unquestionably this instinct in me which belongs to the lower orders of creation; yet with every year I am less a fisherman, though without more humanity or even wisdom; at present I am no fisherman at all. But I see that if I were to live in a wilderness I should again be tempted to become a fisher and hunter in earnest. Besides, there is something essentially unclean about this diet, and all flesh, and I began to see where housework commences, and whence the endeavor, which costs so much, to wear a tidy and respectable appearance, each day, to keep the house sweet and free from all ill odors and sights. Having been my own butcher and scullion and cook, as well as the gentleman for whom the dishes were served up, I can speak from an

unusually complete experience. The practical objection to animal food in my case was its uncleanness; and, besides, when I had caught and cleaned and cooked and eaten my fish, they seemed not to have fed me essentially. It was insignificant and unnecessary, and cost more than it came to. A little bread or a few potatoes would have done as well, with less trouble and filth. Like many of my contemporaries, I had rarely for many years used animal food, or tea, or coffee, etc.; not so much because of any ill effects which I had traced to them, as because they were not agreeable to my imagination. The repugnance to animal food is not the effect of experience, but is an instinct. It appeared more beautiful to live low and fare hard in many respects; and though I never did so, I went far enough to please my imagination. I believe that every man who has ever been earnest to preserve his higher or poetic faculties in the best condition has been particularly inclined to abstain from animal food, and from much food of any kind. It is a significant fact, stated by entomologists, I find it in Kirby and Spence, that "some insects in their perfect state, though furnished with organs of feeding, make no use of them"; and they lay it down as "a general rule, that almost all insects in this state eat much less than in that of larvae. The voracious caterpillar when transformed into a butterfly," . . . "and the gluttonous maggot when become a fly," content themselves with a drop or two of honey or some other sweet liquid. The abdomen under the wings of the butterfly still represents the larva. This is the tidbit which tempts his insectivorous fate. The gross feeder is a man in the larva state; and there are whole nations in that condition, nations without fancy or imagination, whose vast abdomens betray them.

—Henry David Thoreau: *Walden*

What is known as the expository biography is, in reality, a specialized form of interpretation, as we shall see when we come to examine that type more closely. It is merely an attempt to interpret the life of a person and to learn from it the lessons that that life contains.

Three brief examples of the method of interpretation in literature will illustrate what may be expected in this form.

In *Cymbeline*, Act III: scene ii; lines 80 to 84, Shakespeare causes Imogen to say, in reply to Pisanio, who has bade her consider her proposed course of action:

> I see before me, man: nor here, nor here,
> Nor what ensues, but have a fog in them,
> That I cannot look through. Away, I prithee;
> Do as I bid thee: there's no more to say;
> Accessible is none but Milford way.

It is almost necessary, for a clear understanding of such a passage, that a bit of interpretation be supplied. Think first of the probable gestures that would accompany the words, "nor here, nor here, nor what ensues." It is likely that each part of that speech would be accompanied by rapid sweeps of the hand and arm to right and to left, and then finally by a rapid forward movement of both arms to indicate the future or what is before her. Imogen is trying to make clear that although the situation which has made her determine to go

Milford way is not entirely clear to her, and although she is not confident of the outcome of the journey, nevertheless, she does know, intuitively, that, regardless of consequences, her love, her loyalty, her honor demand that she go to Milford. The time for thought, for argument is past for her, "accessible is none but Milford way."

Sometimes it is not a whole passage that needs interpretation but merely one word, the misunderstanding of which may change the whole meaning of the passage in which it is found. The meaning of the famous expression of Hamlet when, on the battlements of the castle, he determines to follow the ghost and is detained by his friends, "Unhand me, gentlemen, or, by Heaven, I'll make a ghost of him that lets me," turns wholly upon the one word "lets." It is only necessary, in this case, to remind the reader that "lets" here is the same word as is found in the legal expression "without let or hindrance" to make clear that it does not mean "permit," but that it is used in the old transitive sense of "prevent."

A similar difficult word occurs in Act I: scene iv, line 300, of *King Lear*. Lear is talking to his daughter Goneril, cursing her for her unfilial attitude, and he bursts out,

> The untented woundings of a father's curse
> Pierce every sense about thee!

Untented is the word that here gives the trouble. This is one of those instances where one is prone to

invent a meaning for a Shakespearean expression rather than discover the true one. It would be so easy to assume that the printer had made a mistake here and that *untented* should read *untended*. Dr. Samuel Tennebaum, writing in *The Dial* for January 20, 1916, points out, however, that, medically, the term refers to undrained and unlanced ulcers, and the whole passage probably refers to the gathering wrath and resentment of the old man that, like ulcers, have festered and cannot be drained of the poison constantly forming in them and oozing from them. Viewed in this light, the passage takes on a terribleness that is not apparent when the word is considered as meaning simply "uncared-for."

It is useless to multiply illustrations. Interpretation is constantly appearing everywhere. Sometimes our unseeing eyes fail to appreciate the beauties that lie round about us. When one arises who can interpret them to our callous souls, they take on a meaning we never dreamed of. Ruskin was such a choice spirit whose life and eye were so carefully trained that all nature seemed to be in tune with him. Any one of his volumes on art or nature or architecture will be found to be a veritable storehouse of unobtrusive interpretations of the beautiful.

A final form of interpretative writing needs to be considered. Sometimes what is here designated as interpretation, in other places is known as the explanation of an idea or a fact. It is closely allied to definition, but it differs from it in that definition

seeks to prescribe the limits or the boundaries of words and terms while interpretation seeks to elucidate and render the idea more intelligible. Furthermore, interpretation concerns itself with principles and facts of life and nature rather than with mere words.

Often we try to ascertain the meaning of some of those phenomena of nature that, because of their commonness, have become such ordinary happenings in our lives that we pay little attention to them. Then a curious individual will arise and make an investigation, and a new principle will be enunciated regarding a phenomenon we have seen so often that we have failed to appreciate its significance. In this way Einstein arrived at his doctrine of relativity. To the layman, his scientific interpretation of the principle is not intelligible. Accordingly, many efforts have been made by others to interpret or translate the principle into simpler language.

Of this character is the following selection wherein the nature and value of what are known as vitamins are set forth.

VITAMINS IN HUMAN AND ANIMAL NUTRITION *

One day, in the early spring, a high school instructor was conducting his science class on a tour of inspection through the laboratories of an Agricultural Experiment Station. They stopped, at one point in their trip, to watch the agri-

* Used by special permission of the author, R. Adams Dutcher, Professor of Agricultural and Biological Chemistry, of the Pennsylvania State College.

cultural chemist, who was feeding a large number of pigeons, guinea pigs, and white rats. "Professor," said the high school instructor, "would you be willing to tell these young people what you are doing and what you hope to accomplish with these animals?" "Certainly," the agricultural chemist replied, as he finished weighing a tiny albino rat, "this is our nutrition laboratory, where we are making a study of the vitamins in some of our common foods and feeding materials." "Some of our textbooks mention these 'vitamins'," the high school instructor said, "but I have been unable to give my students a very clear idea of their nature, occurrence, and importance. I shall appreciate a simple definition of the term 'vitamin'." The chemist brought forth some chairs, in order that the students might take written notes if they desired to do so, and replied, "You have asked me to do a rather difficult thing. It is difficult to give a simple, and yet comprehensive, definition of vitamins because we are just beginning to realize how little we know about their chemical and physiological characteristics. It is doubly hard because your students do not possess much knowledge of chemistry, physiology, and anatomy. I shall do my best, however, to give you some idea of what vitamins appear to be."

At this point the research worker stepped to his laboratory cupboard and brought forth a small metal syringe in which he placed a hollow needle. "You have all seen this instrument before," he said. "It is a hypodermic syringe used by the physician to inject solutions and suspensions of chemical substances into the living organism. Imagine with me, if you will, that a coal miner has been entombed alive through an accident in a mine. In his attempt to escape this living death, he has dug incessantly without food or water for hours and hours and finally falls exhausted. Some time later the rescue party finds him; and the mine physician, feeling the miner's pulse, discovers

that his heart is barely beating. With the view of stimulating the heart to activity, the physician takes one of these hypodermic syringes out of his case and gives the miner an injection of a powerful drug. In a few moments the color begins to return to the miner's face and his breathing becomes more vigorous, because of the stimulating effect of the drug.

"What has this to do with vitamins?" the chemist inquired of the high school students. "Simply this," he added, answering his own question, "the drug produced a stimulating effect on certain organs of the miner's body, causing him to recover from his state of physical and nervous exhaustion.

"Vitamins seem, in a way, to be nature's drugs, stimulating the body cells in order that they may function in a normal manner. Some foods do not contain these vitamins, with the result that long-continued feeding of poor foods of this type brings about an unhealthy condition which can be corrected by other foods which contain these natural stimulants in sufficient quantity. In other words, vitamins are thought to be chemical substances, occurring in some foods but not in others, which are required to stimulate our bodies to use the other food constituents in repairing and manufacturing new bones and tissues, as nature originally intended.

"Although we might consider vitamins as nature's stimulants," the chemist concluded, "I do not wish to leave the impression that they are like drugs. There is no evidence that an excess of vitamins does us harm, nor is it possible to develop a 'vitamin habit,' although it would be to our advantage if we could do so."

The writer has told this story with the view of showing, in simple words, the present conception of vitamin action. In order that we may have a clearer understanding of

other interesting phases of the vitamin question, let us go back, for a moment, and see what has happened in the past.

Before the development of science, man found by experience that certain foods were necessary for his own health and welfare. In other words, man chose his foods largely by instinct and experience. Scientific nutrition really came into existence with the birth of modern chemistry. In the early part of the nineteenth century, chemists began to use chemistry as a tool to study the common foods, with the result that they discovered that foods contained at least four important classes of chemical substance, *viz.*, proteins, which are utilized by the body for repair and construction of muscles and similar tissues; carbohydrates (sugars and starches), which furnish heat and energy for the body; fats, which also serve as body fuels; and the inorganic salts which are used for the construction of such tissues as bones and teeth. After studying the diets, week by week, of families in different walks of life, scientists were able to set up feeding standards and say that a healthy normal person should eat a certain amount of food which contained proteins, fats, and carbohydrates in proportions which vary with the size of the person and the physical work he or she was to perform. In other words, the early nutrition workers devised feeding standards for people and for animals using chemistry as the "measuring stick." We might call this the *chemical period* in nutrition studies.

Not many years later, scientists began to conduct experiments in which they placed their experimental animals in a complicated box-like apparatus called a "calorimeter." This apparatus was so constructed that all the heat radiated from the animal's body could be caught and measured. These scientists made the discovery that the body is not unlike an internal combustion engine and that the

food is quite comparable with the fuel that is burned in the engine. It was observed that the amount of food needed by animals depended upon the amount of heat to be given off and work to be done. As a result of these interesting studies, a new type of feeding standard was finally devised which measured food and food values in a manner quite similar to that used by the factory superintendent when he buys coal, *i.e.*, in terms of heat units called "calories."

As a result we can step into many restaurants in the larger cities and find, printed on the menu card, the number of calories of heat stored in each dish of food that we desire to order. This new measuring stick, which measures foods in terms of calories, has also been useful in the feeding of farm animals. It is now possible for the modern farmer to feed his dairy cows what are known as "balanced rations," which help him to produce the greatest amount of milk at a minimum cost and still keep his dairy herd in excellent physical condition. This period of nutritional research might be called the "calorie period" or the "energy period," in which the value of foods was expressed in terms of available heat or energy units called calories.

During the time these studies were being made other scientists were making some interesting and valuable discoveries. Some of these discoveries were directly traceable to certain diseases which seemed to be related in some way to the diet of the people so afflicted. For example, one disease known as beri-beri, had been known in certain sections of the world for hundreds of years. This disease was quite common in sections of India, Japan, the Dutch Colonies, and elsewhere. Eijkman, a Dutch physician, like several other keen observers, had noted that beri-beri was most prevalent in those districts where people were in the habit of subsisting, very largely, on white rice or polished rice from which the brown outer coat had been

removed. This outer coat or bran, which is removed during the manufacture of white rice, is sometimes called "rice polishings." On the other hand, these early physicians found other localities in which beri-beri was about as prevalent as the proverbial needle in the haystack. Inquiry showed that the people in these localities also depended on rice as the most important article of diet, but, either through laziness or preference, they preferred to eat the brown rice in its natural form, without removing the branny portion. This set Dr. Eijkman to thinking and, finally, to experimenting. He found that white rice produced a disease in fowls which seemed to be very similar to human beri-beri. Much to his joy and surprise, he discovered that he could cause the disease to disappear if he fed the rice bran to his birds which had become paralyzed from the effects of the white rice feeding. He then made a solution of rice bran with alcohol and water and obtained a clear solution. He allowed this solution to evaporate until the alcohol had disappeared and, after adding a little water, fed the clear solution to his sick birds, and they recovered just as quickly as if he had fed the rice bran itself. Evidently the doctor had dissolved something out of the rice bran which possessed a curative or stimulative effect on the diseased fowls. This was in 1897.

In 1906 an English biological chemist by the name of Hopkins created considerable discussion by announcing that he fed rats on proteins, carbohydrates, lard, and mineral salts without obtaining growth. When he added about a quarter of a thimbleful of cow's milk, however, the rats almost exceeded the speed limit in their apparent desire to grow and "catch up" with their brothers and sisters, which had been on normal diets. Dr. Hopkins drew the conclusions that, since milk is 87 per cent water, it is impossible to attribute this growth-promoting power to the proteins, fats, and carbohydrates in such a tiny

quantity of milk. He suggested that there must be something in milk that is not protein, or fat, or carbohydrate, or mineral salt, which is necessary for normal development. Later he gave these unknown growth-promoting substances the name "accessory food factors." We may, therefore, give Eijkman and Hopkins the credit of calling attention to the presence of these unknown stimulatory food factors.

In Germany, a young Polish chemist by the name of Casimir Funk decided that, although he could lay no claim to previous residence in Missouri, he must "be shown" regarding these mysterious substances. He repeated Eijkman's work and obtained the same results; but, being a chemist, he decided to try to find out what Doctor Eijkman had extracted from the rice bran with the alcohol. Dr. Funk finally obtained a few tiny crystals of a substance which contained nitrogen, carbon, hydrogen, and oxygen. He found, also, that these crystals behaved, chemically, very much like substances known, in organic chemistry, as *amines*, which are a sort of first cousin to ammonia. When a solution of these crystals was fed to, or injected into, fowls which had developed beri-beri, the birds recovered. He thought that he had isolated an "accessory food factor." He wanted to give it a name; so he probably said to himself, "This substance is very *vital* to the welfare of these birds, and it behaves like an *amine*. I will combine these two ideas and call the substance a 'vitamine'." The credit for the term "vitamine," therefore, goes to Doctor Funk. Later, it was considered wise to drop the final *e* in the word "vitamine," because the poisonous drugs, morphine, strychnine, and cocaine, all end in *ine*, and no self-respecting vitamin wished to be associated in any way, shape, or manner with these occasionally disreputable members of the chemical family. The first syllable of the term *vitamin* is pronounced as in the word *vital*, and the last three letters of the word are

pronounced exactly as you would pronounce the name of the wife of our well-known friend, Mr. Andy Gump, and we assume that everyone knows about "Min."

About 1910, three prominent American investigators, Osborne and Mendel, of the Connecticut Agricultural Experiment Station and Yale University, and McCollum of the Wisconsin Agricultural Experiment Station, published scientific papers describing experiments in which rats were fed diets composed of chemically purified substances. By this method it was possible to show the effect of the presence or absence of any chemical substances they desired to study. They were able to show which of the mineral salts were absolutely essential and which ones could be dispensed with, at least for a time.

Osborne and Mendel made the interesting and valuable discovery that some proteins were more valuable than others. In some of their experiments animals died of protein starvation in spite of the fact that the amount of protein in the ration was high. This, they explained, was because some proteins were not capable of building body tissues efficiently, while others were highly satisfactory. Their work marks a third period in the nutrition investigations which served to give us better feeding standards. As we have already stated, period one was the *chemical* period, period two was the *calorie* or *energy* period, and the third, which we have just described, we will call the *biological* period, because living animals are used as the "measuring stick" in helping us set up better feeding standards. The biological method, where animals are used, really involves all other periods, for we pay even greater attention to the chemical composition of the diet; we balance the rations with reference to calories, but we consider the quality, as well as the quantity, of the various food constituents.

Dr. McCollum and Dr. Cornelia Kennedy, his assistant, had not worked long before they discovered that rats would grow much better if they added some of Dr. Funk's anti-beri-beri vitamin to the diets of their rats. Evidently this vitamin possessed growth-promoting properties in addition to its anti-beri-beri properties. Just prior to this time the Connecticut and Wisconsin workers exploded a new scientific bomb. They announced that some fats and oils were more valuable than others for growing animals. They discovered that this was true because the more nutritious fats or oils contained a new vitamin. Butter fat, they said, contained this vitamin, while olive oil did not. Lard was practically devoid of it, while egg yolk fat was comparatively rich.

In order that it might be possible to distinguish between the vitamins, Dr. McCollum suggested that the latter be called "fat-soluble A," because it is soluble in fats, and that Dr. Funk's vitamin receive the name "water-soluble B." Hence we have the alphabetical system of names that is now in use, with the exception that we now usually refer to these accessory food factors as "Vitamin A," "Vitamin B," etc. At the present time only five letters of the alphabet are used to designate these mysterious food factors, and although it is entirely possible that new vitamins will be discovered, as scientific work progresses, there is little danger that we will ever exhaust the English alphabet. If that becomes necessary, a wag has suggested that we can always resort to the alphabetical system of naming which is now in vogue in designating our numerous radio broadcasting stations.

Professor Dutcher's article then proceeds to discuss in detail the characteristics and the therapeutic values of each of the known vitamins. The results

are presented in the summary and table that follow:

Summary

Vitamins are chemical substances necessary for growth in the young and for health and well being in adult human beings or mature animals. There is no danger of vitamin deficiency if we plan our meals or the rations of farm animals in such a manner that a variety of foods is fed. The old saying, "Variety is the spice of life," applies to our dietary habits as well as it does to our social, physical, and mental activities. If we desire to do the best mental and physical work we must have healthy bodies. Intelligent feeding will play an important role in helping us to develop healthy bodies. This can be accomplished by eating the foods which contain the necessary proteins, fats, carbohydrates, mineral salts, and vitamins. We should obtain our vitamins from the garden, the orchard, the poultry yard, and the dairy.

The following table, taken from Bulletin 184 of the Arkansas Agricultural Experiment Station, gives the approximate vitamin values for a few of our most common foods and feeding materials:

Article	*A*	*B*	*C*
Apples	Poor	Poor	Fair
Bananas	Little	Little	Fair
Barley, whole	Poor	Good	Trace
Beans, navy	Unknown	Rich	Trace
Beets	Fair	Fair	Fair
Bread, white (water)	Doubtful	Little	Doubtful
Bread, whole wheat (milk)	Good	Good	Doubtful
Cabbage, raw	Good	Good	Rich
Carrots, fresh raw	Good	Good	Fair
Codliver oil	Very rich	Trace ?	Trace
Corn, white	Trace	Good	Trace

Corn, yellow	Fair	Good	Trace
Cottonseed oil	Little	Trace	Trace
Eggs	Good	Fair	Poor
Grapefruit	Unknown	Good	Good
Kidney	Good	Good	Little
Lard	Little	Trace	Trace
Lemon juice	Unknown	Good	Rich
Lettuce	Good	Good	Rich
Liver	Good	Good	Fair
Meat (muscle)	Trace	Little	Little
Milk	Rich	Good	Fair
Oats	Poor	Good	Trace
Orange juice	Poor	Good	Rich
Peas, green	Good	Good	Poor ?
Potatoes, white, boiled (15 minutes)	Little	Fair	Fair
Spinach, fresh	Rich	Rich	Good
Tomatoes, raw	Good	Rich	Rich
Tomatoes, canned	Good	Rich	Rich
Yeast	Absent	Rich	Absent

—R. Adams Dutcher

Individuality in Interpretative Writing. Every interpretation is colored, to some extent at least, by the training, background, environment, and interests of the writer. In dancing, physical strength, physical form, and grace play important parts; and in music, physical fitness and temperament play as important parts as does mere mechanical accuracy. Similarly, in writing, experience, background (heredity and training), and outlook on life—or, as some call it, one's "philosophy of life"—are important factors

in the interpretation of life, of nature, and of letters. The scientist is prone to interpret everything in the terms of science; the economist, in terms of dollars and of supply and demand; the painter, in terms of pigments and form; the business man, in terms of markets and turnover. The materialist ignores idealism and spirituality; the ultra-modernist pooh-poohs tradition and law. In literature, one has only to look at the interpretations of Shakespeare's work to realize how prominent a part individuality plays in their making. Swinburne and Shaw differ materially in their ideas of the great Elizabethan, and both are at odds with such men as Charles Lamb, William Hazlitt, and Thomas De Quincey. If you were to read Macaulay and Lamb on the subject of the drama of the Restoration, it would immediately become evident to you how greatly the point of view and the general attitude of a person toward life will color his interpretation of the matters that come under his observation.

These matters have been suggested because it is well to remember that there is a vast difference between what a type of writing is theoretically and what it may become in actual practice. In theory, interpretative writing should be essentially objective: the interpreter should endeavor, as was suggested at the beginning of this section, to put himself in the place of him he would interpret and endeavor to present the simplification of his views as the author, himself, would present them were he given

an opportunity. Where the matter interpreted is a phenomenon or a principle, the writer of the interpretation should use every endeavor to view the matter in an unprejudiced fashion, seeking above all to know the truth and to present it to others. It is only by such means that we shall be spared in the future from being inundated by the increase of the flood of worthless interpretation.

EXERCISES

I. Write a brief interpretation of several of the following quotations:

1. For thence,—a paradox
   Which comforts while it mocks,—
   Shall life succeed in that it seems to fail:
   What I aspired to be,
   And was not, comforts me:
   A brute I might have been, but would not sink i' the scale.

   —Robert Browning: "Rabbi Ben Ezra"

2. Say not the struggle naught availeth,
   The labor and the wounds are vain,
   The enemy faints not, nor faileth,
   And as things have been they remain.

   If hopes were dupes, fears may be liars;
   It may be, in yon smoke conceal'd,
   Your comrades chase e'en now the fliers,
   And, but for you, possess the field.

   —Arthur Hugh Clough: "Say Not the Struggle Naught Availeth"

3. Make me thy lyre, even as the forest is:
What if my leaves are falling like its own!
The tumult of thy mighty harmonies

Will take from both a deep, autumnal tone,
Sweet though in sadness. Be thou, Spirit fierce,
My spirit! Be thou me, impetuous one!

Drive my dead thoughts over the universe,
Like withered leaves, to quicken a new birth;
And, by the incantation of this verse,

Scatter, as from an unextinguish'd hearth
Ashes and sparks, my words among mankind!
Be through my lips to unawaken'd earth

The trumpet of a prophecy! O Wind,
If Winter comes, can Spring be far behind?

—Percy Bysshe Shelley: "Ode to the West Wind"

4. They went with songs to the battle, they were young,
Straight of limb, true of eye, steady and aglow.
They were staunch to the end against odds uncounted,
They fell with their faces to the foe.

They shall grow not old, as we that are left grow old.
Age shall not weary them, nor the years condemn.

—Laurence Binyon: "For the Fallen"

5. Revenge is a kind of wild justice; which the more man's nature runs to, the more ought law to weed it out.

—Sir Francis Bacon: "Of Revenge"

6. There is a sort of intellectual chemistry which is quite as marvelous as material chemistry and a thousand times more difficult to observe. One general truth may, how-

ever, be relied upon. . . . It is true that *everything* we learn affects the *whole* character of the mind.

Consider how incalculably important becomes the question of *proportion* in our knowledge, and how that which we *are* is dependent as much upon our ignorance as our science. What we call ignorance is only a smaller proportion—what we call science only a larger.

—Philip Gilbert Hamerton: *The Intellectual Life*

7. Books are the best of things, well used; abused, among the worst. What is the right use? What is the one end, which all means go to effect? They are for nothing but to inspire. I had better never see a book, than to be warped by its attraction clean out of my own orbit, and made a satellite instead of a system. The one thing in the world, of value, is the active soul. This every man is entitled to; this every man contains within him, although, in almost all men, obstructed, and as yet unborn. The soul active sees absolute truth; and utters truth, or creates. In this action, it is genius; not the privilege of here and there a favorite, but the sound estate of every man. In its essence it is progressive. The book, the college, the school of art, the institution of any kind, stop with some past utterance of genius. This is good, say they—let us hold by this. They pin me down. They look backward and not forward. But genius looks forward; the eyes of man are set in his forehead, not in his hindhead; man hopes; genius creates. Whatever talents may be, if the man create not, the pure efflux of the Deity is not his; cinders and smoke there may be, but not yet flame. There are creative manners, there are creative actions, and creative words; manners, actions, words, that is, indicative of no custom or authority, but springing spontaneous from the mind's own sense of good and fair.

. . . . . .

Undoubtedly there is a right way of reading, so it be sternly subordinated. Man Thinking must not be subdued by his instruments. Books are for the scholar's idle time. When we can read God directly, the hour is too precious to be wasted in other men's transcripts of their readings.

—Ralph Waldo Emerson: *The American Scholar*

II. Write an interpretation of some scientific subject for the members of your class. Use such language and illustrative material as will make it readily understood by those for whom you write.

III. Write a letter to a business man, a church member, or a statesman, explaining to him the value of one of the following activities:

The Education of the Negro	Foreign Missions
The Slums of a City	The League of Nations

The Book Review. A final form of exposition in which the thought of another is summarized and set forth is the Book Review.

The object of the book review is not only to place before the reader the ideas that are contained in a particular book but also to convey in a few words some notion of the value of the book. The judgment expressed in a review is ordinarily not so extensive or so definitive as is that which is found in what we call literary criticism. It is meant to be informative rather than definitely critical. Although the analytical method of approach employed in the abstract is used largely in the review, the review goes farther than the abstract in that it contains

some expression of the individual opinion of its author. In reality, the book review is a miniature literary criticism. It differs from the criticism, however, in that it never takes for granted that the reader has any previous knowledge of the book or article reviewed. Furthermore, it differs from the criticism in that it often judges on the basis of the opinions of the day that gives it birth rather than upon the opinions that are of all time.

The following exposition of the art of book reviewing is not only an excellent example of the explanation of a fact but also an interesting setting forth of the demands this type makes upon its writer.

THE CRITICAL TIGHT ROPE *

Why do reviewers and readers so often disagree? Authors answer profanely, publishers bitterly, reviewers with contempt. And all are usually, though not always, wrong. For reviewers are more honest than authors suppose, and sometimes better able to judge of the absolute merits of a book than the man who is selling it.

Unfortunately for peace in the literary world, "absolute merit" by no means tells all there is to tell about a book. We read books to pass the time, we read for timely or topical interest, we read to suffuse some immediate emotion of our own, we read because the book tells us what we want to believe is true; and all of these desires, if satisfied, can make a book seem interesting and good, even as a religious prepossession or a dislike of dialect can make other books unsympathetic to individual tastes.

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We know what we like, and rightly hate to be told that it is unworthy.

It is the business of the reviewer to consider these prejudices and discount them. Neglect them he cannot without seriously damaging the news value of his review. And if there is a difference between criticism and reviewing, it lies in this, that the reviewer is concerned with all three elements of time, the circumstances of the present as well as of the past and the future, whereas the critic's business is to estimate literature with special reference to its permanent values. That is why reviewing is so precarious, and good reviewing is so difficult. Its audience is in the present, and the present changes even while the writer writes. Therefore, like the mariner who looks at sky and sea before going below to plot his course, the reviewer must frankly ask, "Will this book be liked or disliked *now* and by *whom?*" before raising more fundamental questions.

And yet his chief job is to decide according to his lights what a book is really good for or bad for, and if he does not do this he is at best a news writer or a gossip, at worst a toady to the public, a scavenger among reputations, or a dull blunderer. When writers disagree with him it is, one admits, quite frequently because he is wrong —in so delicate a profession what human being equipped with prejudices of his own and blind, like all of us, to special excellences and special defects, would not be wrong occasionally! But more often, if the reader spurns his critic, it is because their aims do not meet; the one is asking, "Why do *I* like this masterpiece or hate this boredom in cloth covers?" the other, "Should it be liked?"

And yet the fault will always be charged to the reviewer, for who has the heart to scold a reader warm with enthusiasm or kindled with dislike. Authors, especially, can stand anything but indifference to their books. The ob-

stinate reviewer will continually refuse to walk his tight rope with an even balance between permanent and immediate values. Down he jumps into the present and praises or condemns with most uncritical forgetfulness of everything except what they are likely to say in reading clubs or book shops. Or, more often, over he topples on the other side, and reviews Miss Poppett's novel, Mr. Brunderum's essays, or Professor Digit's new biography as if he were writing exclusively for Aristotle, Erasmus, and Mr. Spingarn, and did not give two whoops whether the unfortunate volume were read by ten living people or ten thousand. Even in reviewing one needs a dash of imagination in the dish of scholarship.

—Amy Loveman in *The Saturday Review*, April 25, 1925

No prescribed length can be set for the review. It may be an article of many pages or it may be only a short paragraph of one or two sentences. In either case, it should give some knowledge of the book and some estimate of its value. Notice the following examples as illustrating this point:

For the fifth edition of Wilfred Gibson's *Daily Bread* (Macmillan) the title poem has been rewritten. The poems are in the form of dramatic scenes or tragedies from the life of the humble, introducing as characters the deserted mistress, the woman whose child is stillborn, whose husband has been lost in a mine accident or mangled by machinery, and so on. The language is incongruously elevated, the moral sentiments platitudinous, and the poems almost uniformly dull.

—*The Dial*

This paragraph is a fair example of the brief review. In it are to be found the concise statement of the

contents of the book and a pointed and concrete statement of the opinion that the reviewer of the book has of it. The following article is a somewhat longer example of the present day method as applied to reviewing:

THE WHITE MONKEY. By John Galsworthy. London: Heinemann; New York: Scribner's, 1924.

Whether Mr. John Galsworthy's new novel, *The White Monkey*, is merely an isolated pendant to the series of social studies lumped together under the title of *The Forsyte Saga*, or the precursor of a second catena of novels continuing the history of that famous family, must for the present remain a matter of doubt. Mr. Galsworthy is nothing if not individual, and *The White Monkey* is, in some respects, the most peculiar book he has yet given us. It is not that it covers a wide area of social interests, and deals with the histories of different groups of people, the main currents of whose lives are widely set apart—many novels do that without producing the peculiar effect left on the mind of the reader of *The White Monkey*. It tells several distinct stories.

It tells the story of the first three years of the married life of Michael Mont and Fleur Forsyte, and of how very nearly it came to wreck through the infatuation of Wilfred Desert for his friend's wife; how the situation was saved by Wilfred's sudden departure from England and the subsequent birth of Michael's and Fleur's child. It tells the story of Tony Bickett, who "snooped" his employer's property to provide nourishing dainties for his invalid wife; and of the wife herself, who, restored to health, heroically posed . . . in order to earn the money to save her husband from the squalid misery of a pavement vendor of toy balloons.

It tells how the solidly based and honestly built reputation of Soames Forsyte for financial infallibility was shaken by the rascally conduct of Mr. Elderson, manager of the Providential Premium Reassurance Society. And yet, although Mr. Galsworthy has been at no apparent pains to weld these different strands together, so that each stands apart in the reader's recollection as a separate individual story, by some nameless feat of art the book as a whole is absolutely free from any "spottiness" or feebleness.

Mr. Galsworthy's powers of portraiture have never been better exemplified. There is no figure on his crowded stage which does not show the *coup de pouce* which reveals the master. It is always a ticklish feat for a novelist to reproduce a strongly marked character in new conditions, but Soames Forsyte, who pervades *The White Monkey* as he pervaded the *Saga*, comes through the ordeal with distinguished success.

—The London *Sunday Times*

A great change has come over the literary review in the last century. The trade of literary reviewer, which really began with the inauguration of the *Edinburgh Review* in 1802 and of *Blackwood's* in 1806, was a much different trade then from what it has since become. The two examples quoted above together with Miss Loveman's exposition of what the literary reviewer of today stands for will serve to acquaint us with the nature of this form at the present time. A comparison of these examples with Macaulay's essay, "Samuel Johnson," or Carlyle's essay, "Robert Burns," commonly known in our day as English Classics, will make evident at once

the vast gulf that separates the two types. As we look at these two essays today, Macaulay's "Samuel Johnson" is a Whig's criticism of Samuel Johnson, Tory; and Carlyle's "Robert Burns" is a Scotchman's weighing of a compatriot's life and work according to a set of biographical standards, his defense of Burns, the Scot, and his attack on those whose misguided attentions to Burns hastened his downfall. And yet Macaulay's essay was ostensibly a review of John Wilson Croker's *Life of Samuel Johnson*, published in a new edition in 1831; and Carlyle's estimate was supposedly a review of John Gibson Lockhart's *Life of Burns*.

Compare the reviews quoted above with any of the more famous reviews of the early nineteenth-century magazines, and it will be at once evident what a change has come over the writing of this very interesting and necessary form.

The following illustration, taken from the *Edinburgh Review*, is an excellent example of the method pursued by the old reviewers in their examination of a book:

ON BULLS

Essay on Irish Bulls. By Richard Lovell Edgeworth and Maria Edgeworth. London, 1802.

We hardly know what to say about this rambling scrambling book; but that we are quite sure the author, when he began any sentence in it, had not the smallest suspicion of what it was about to contain. We say the author, because, in spite of the mixture of sexes in the

title-page, we are strongly inclined to suspect that the male contributions exceed the female in a very great degree. The *Essay on Irish Bulls* is written much with the same mind, and in the same manner, as a schoolboy takes a walk; he moves on for ten yards on the straight road with surprising perseverance; then sets out after a butterfly, looks for a bird's nest, or jumps backwards and forwards over a ditch. In the same manner, this nimble and digressive gentleman is away after every object which crosses his mind. If you leave him at the end of a comma, in a steady pursuit of his subject, you are sure to find him, before the next full stop, a hundred yards to the right or left, frisking, capering, and grinning in a high paroxysm of merriment and agility. Mr. Edgeworth seems to possess the sentiments of an accomplished gentleman, the information of a scholar, and the vivacity of a first-rate harlequin. He is fuddled with animal spirits, giddy with constitutional joy; in such a state he must have written on, or burst. A discharge of ink was an evacuation absolutely necessary, to avoid fatal and plethoric congestion.

The object of the book is to prove that the practice of making bulls is not more imputable to the Irish than to any other people; and the manner in which he sets about it, is to quote examples of bulls produced in other countries. But this is surely a singular way of reasoning the question: for there are goiters out of the Valais, extortioners who do not worship Moses, oat cakes over the Tweed, and balm beyond the precincts of Gilead. If nothing can be said to exist preëminently and emphatically in one country, which exists at all in another, then Frenchmen are not gay, nor Spaniards grave, nor are gentlemen of the Milesian race remarkable for their disinterested contempt of wealth in their connubial relations. It is probable there is some foundation for a character so

generally diffused; though it is also probable that such foundation is extremely enlarged by fame. If there were no foundation for the common opinion, we must suppose national characters formed by chance; and that the Irish might, by accident, have been laughed at as bashful and sheepish; which is impossible. The author puzzles himself a good deal about the nature of bulls, without coming to any decision about the matter. Though the question is not a very easy one, we shall venture to say that a bull is an apparent congruity and real incongruity of ideas suddenly discovered. And if this account of bulls be just, they are (as might have been supposed) the very reverse of wit; for as wit discovers real relations that are not apparent, bulls admit apparent relations that are not real. The pleasure arising from bulls proceeds from our discovering two things to be dissimilar in which a resemblance might have been suspected. The same doctrine will apply to wit and to bulls in action. Practical wit discovers connection or relation between actions, in which duller understanding discovers none; and practical bulls originate from an apparent relation between two actions, which more correct understandings immediately perceive to have no relation at all.

Louis XIV, being extremely harassed by the repeated solicitations of a veteran officer for promotion, said one day, loud enough to be heard, "That gentleman is the most troublesome officer I have in my service." "That is precisely the charge," said the old man, "which your Majesty's enemies bring against me."

An English gentleman (says Mr. Edgeworth, in a story cited from Joe Miller) was writing a letter in a coffee house; and perceiving that an Irishman stationed behind him was taking that liberty which Parmenio used with his friend Alexander, instead of putting his seal upon the lips of the *curious impertinent*, the English gentleman

thought proper to reprove the Hibernian, if not with delicacy, at least with poetical justice. He concluded writing his letter in these words: "I would say more, but a damned tall Irishman is reading over my shoulder every word I write."

"You lie, you scoundrel," said the self-convicted Hibernian.

The pleasure derived from the first of these stories proceeds from the discovery of the relation that subsists between the object he had in view, and the assent of the officer to an observation so unfriendly to that end. In the first rapid glance which the mind throws upon his words, he appears, by his acquiescence, to be pleading against himself. There seems to be no relation between what he says and what he wishes to effect by speaking.

In the second story, the pleasure is directly the reverse. The lie given was apparently the readiest means of proving his innocence, and really the most effectual way of establishing his guilt. There seems for a moment to be a strong relation between the means and the object; while, in fact, no irrelation can be so complete.

What connection is there between pelting stones at monkeys and gathering coconuts from lofty trees? Apparently none. But monkeys sit upon coconut trees; monkeys are imitative animals; and if you pelt a monkey with a stone, he pelts you with a coconut in return. This scheme of gathering coconuts is very witty, and would be more so, if it did not appear useful: for the idea of utility is always inimical to the idea of wit. There appears, on the contrary, to be some relation between the revenge of the Irish rebels against a banker, and the means which they took to gratify it, by burning all his notes wherever they found them; whereas, they could not have rendered him a more essential service. In both these cases of bulls, the one verbal, the other practical, there is an apparent congruity

and real incongruity of ideas. In both the cases of wit, there is an apparent incongruity and a real relation.

It is clear that a bull cannot depend upon mere incongruity alone; for if a man were to say that he would ride to London upon a cocked hat, or that he would cut his throat with a pound of pickled salmon, this, though completely incongruous, would not be to make bulls, but to talk nonsense. The stronger the apparent connection, and the more complete the real disconnection of the ideas, the greater the surprise and the greater the bull. The less apparent, and the more complete the relations established by wit, the higher gratification does it afford. A great deal of the pleasure experienced from bulls proceeds from the sense of superiority in ourselves. Bulls which we invented, or knew to be invented, might please, but in a less degree, for want of this additional zest.

As there must be apparent connection, and real incongruity, it is seldom that a man of sense and education finds any form of words by which he is conscious that he might have been deceived into a bull. To conceive how the person has been deceived, he must suppose a degree of information very different from, and a species of character very heterogeneous to, his own; a process which diminishes surprise, and consequently pleasure. In the above-mentioned story of the Irishman overlooking the man writing, no person of ordinary sagacity can suppose himself betrayed into such a mistake; but he can easily represent to himself a kind of character that might have been so fallacious that any man may imagine himself to have been betrayed into them; but these are rare: and, in general, it is a poor contemptible species of amusement; a delight in which evinces a very bad taste in wit.

Whether the Irish make more bulls than their neighbors is, as we have before remarked, not a point of much importance; but it is of considerable importance that the

character of a nation should not be degraded; and Mr. Edgeworth has great merit in his very benevolent intention of doing justice to the excellent qualities of the Irish. It is not possible to read his book without feeling a strong and a new disposition in their favor. Whether the imitation of the Irish manner be accurate in his little stories we cannot determine; but we feel the same confidence in the accuracy of the imitation that is often felt in the resemblance of a portrait of which we have never seen the original. It is no very high compliment to Mr. Edgeworth's creative powers to say he could not have formed anything, which was not real, so like reality; but such a remark only robs Peter to pay Paul; and gives everything to his powers of observation, which it takes from those of his imagination. In truth, nothing can be better than his imitation of the Irish manner: It is first-rate painting.

Edgeworth & Co. have another faculty in great perfection. They are eminently masters of the pathos. The firm drew tears from us in the stories of little Dominick, and of the Irish beggar who killed his sweetheart: Never was any grief more natural or simple. The first, however, ends in a very foolish way:

> —formosa superne
> Desinit in piscem.

We are extremely glad that our avocations did not call us from Bath to London, on the day that the Bath coach conversation took place. We except from this wish the story with which the conversation terminates; for as soon as Mr. Edgeworth enters upon a story he excels.

We must confess we have been much more pleased with Mr. Edgeworth in his laughing and in his pathetic, than in his grave and reasoning moods. He meant, perhaps, that we should; and it certainly is not very necessary that a writer should be profound on the subject of bulls. What-

ever be the deficiencies of the book, they are, in our estimation, amply atoned for by its merits; by none more than that lively feeling of compassion which pervades it for the distresses of the wild, kind-hearted, blundering poor of Ireland.

—SIDNEY SMITH in the *Edinburgh Review*

EXERCISES

I. Bring into class a review of about a page in length which you have taken from a current magazine or newspaper. Be prepared to discuss the review from the standpoints that have been mentioned in this section of the book. Point out its good characteristics and its faults. Does it give you a fair idea of the scope of the book it reviews? Does it give what seems to be a fair opinion of its worth?

II. Read the book, the review of which you brought into class—or another similar book—and prepare a review of about five hundred words in length which might be acceptable by a reputable magazine that makes a specialty of reviewing books.

III. After you have read a book on some subject other than fiction, write a review of about eight hundred words, taking for your subject the subject of the book and treating that subject after the fashion of the review "On Bulls."

CHAPTER III

Criticism

Nature and Function of Criticism. If you have ever attended a baseball game—and what American youth has not done so?—you will have noticed that, sometimes, after a foul ball has been hit, the catcher picks up the ball, looks it over, and, without a word, throws it to the umpire. The umpire turns it over in his hand and, without hesitation, tosses it toward the bench. Then, immediately, a box containing a new ball is thrown to him. Did you ever think of this as criticism? And yet it is: the umpire, with certain standards in his mind—standards that have been set by the rules of the game—has decided after looking at the ball that it does not conform to those rules and is consequently not a fair ball to play with. The umpire's criticism in this instance differs, however, from that of the person we ordinarily consider a critic in that all the judgments and reasons were unspoken. A similar method is employed by the same umpire when he calls one pitched ball a "strike" and the next one a "ball." All the steps by which the decision is compiled can be discerned by a little analysis. The ball is thrown and thuds into the catcher's mit; and, although the

batter stands as motionless as before, up goes the umpire's right hand and "Strike," he barks. What has happened? The rule states that a pitched ball is to be called a "strike," whether the batter hits at it or not, if it passes over any part of the home plate and is not higher than the batsman's shoulder or lower than his knee. In the fraction of a second that passes while the ball travels the fifty feet from pitcher to catcher, the trained eye of the umpire has observed that its passage fulfills all the conditions laid down in the rules for a strike. He, therefore, forms his judgment or criticism of the pitcher's throw and calls it a "strike."

All of us are constantly forming judgments and expressing opinions or criticisms of everything we see or hear. The beauty of a flower, the value of a commodity, the worth of a piece of machinery or apparatus, the righteousness of an action, the greatness of a piece of literature or a work of art, the truth of an opinion, are subjects of our everyday judgments. They are, in reality, criticisms, although, in length, they vary from a mere nod of the head to the contents of a large volume. Their ultimate value is determined by the way in which they approximate the true value of the subject judged. Dryden expressed the idea when he wrote, "By criticism, as it was first instituted by Aristotle, was meant a standard of judging well."

Unfortunately, the term criticism has acquired a false meaning. Like the terms *behave* and *demean*,

the term criticism is entirely colorless in its meaning. But, as *behave* and *demean*, which mean only "to act or to conduct oneself," have, in the minds of many, come to denote acting well and debasing oneself, respectively, so criticism has been incorrectly assumed to mean only censorious or unfavorable judging. In reality, criticism means so pointing out the good and the bad qualities of the subject under consideration that a truthful estimate or judgment may result.

Matthew Arnold considered criticism as a type of curiosity. In this sense, criticism "obeys an instinct prompting it to try to know the best that is known and thought in the world, irrespectively of practice, politics, and everything of the kind; and to value knowledge and thought as they approach this best, without the intrusion of any other considerations whatever." (*The Function of Criticism.*) The process, then, is one by which we endeavor to seek out the best and discard the worst. It is the method (1) of submitting the various objects or subjects that come to our attention to our standards of right; and, (2) by comparing and contrasting them with these standards, of arriving at just conclusions with regard to them. It does not matter how insignificant the subject judged may be, the act of judging is just as truly criticism as though the subject were of supreme importance. The automobilist who puts an air-pressure gauge on the valve of one of his tires, finds that the

pressure is as it should be, screws on the cap, and goes his way has performed a critical, albeit a mechanical, judgment on those tires as truly as if he had found that, the pressure being low, it would be necessary to fill them up again. It is just as critical a judgment as is performed by the person who, having gone into a store to purchase a commodity, and, being told the price, has examined the goods, put his hand in his pocket, paid the amount asked, and gone out with the purchase in his hand. He has criticized the commodity just as surely as did the would-be purchaser who, on being told the price of the article, looked it over, turned on his heel, and stalked out of the store with the cryptic "Too high" on his lips.

Qualifications Necessary for the Critic. The act of criticism presupposes certain well-defined acquirements and certain qualities of mind, some of which, at least, can be secured only through the most painstaking, conscious effort and study. Of all these qualities, knowledge, or background, is the most important. Others that will be considered are more inherent in the nature of the individual and their lack prevents some otherwise estimable persons from ever being entirely satisfactory critics.

It is seldom that all the qualities that go to make up a perfectly satisfactory critic combine in perfect equilibrium in those who attempt to make evaluations of objects or subjects. A simple list of these qualities shows why a perfect critic is hard to find.

The perfect critic should have the following qualifications in just the right proportions:

1. Knowledge of the subject
2. Analytical ability
3. Clear judgment
4. Fairness, or honesty
5. Common sense

These comprise the ideal toward which the critic should strive. Any person, however, who is willing to study and to train his faculties can attain a great measure of proficiency in making judgments.

The following pages explain those qualities that good critics should have. The student, by studying them carefully and by trying to observe the ideas and directions contained in them, can train his faculties in such a way as to improve his ability to make the common judgments that he is daily called upon to make.

Knowledge. Of all the qualities that go to make the good critic, perhaps the most important is knowledge of the subjects that he expects to criticize. This quality, however, is that one of the critical qualities which is most easily acquired. It demands only concentration of effort and study. Increase of knowledge, added to years of experience, brings wisdom, discrimination, and judgment. I know of no better illustration of what knowledge means to the critic than the following passage from Charles Lamb:

MY FIRST PLAY

. . . But when we got in [the theater] and I beheld the green curtain that veiled a heaven to my imagination, which was soon to be disclosed—the breathless anticipations I endured! I had seen something like it in a plate prefixed to *Troilus and Cressida*, in Rowe's Shakespeare—the tent scene with Diomed—and a sight of that plate can always bring back in a measure the feeling of that evening. The boxes at that time, full of well-dressed women of quality, projected over the pit; and the pilasters reaching down were adorned with a glittering substance (I know not what) under glass (as it seemed), resembling—a homely fancy—but I judged it to be sugar-candy—yet, to my raised imagination, divested of its homelier qualities, it appeared a glorified candy! The orchestra lights at length arose, those fair "Auroras"! Once the bell sounded. It was to ring out yet once again;—and, incapable of the anticipation, I reposed my shut eyes in a sort of resignation upon the maternal lap. It rang a second time. The curtain drew up (I was not past six years old), and the play was *Artaxerxes!*

I had dabbled a little in *Universal History*—the ancient part of it—and here was the court of Persia. I was being admitted to a sight of the past. I took no proper interest in the action going on, for I understood not its import; but I heard the word Darius, and I was in the midst of Daniel. All feeling was absorbed in vision. Gorgeous vests, gardens, palaces, princesses, passed before me. I knew not players. I was in Persepolis for the time, and the burning idol of their devotion almost converted me into a worshiper. I was awe-struck, and believed those significations to be something more than elemental fires. It was all enchantment and a dream. No such pleasure has since visited me but in dreams. Harlequin's invasion

followed; where, I remember, the transformation of the magistrates into reverend beldams seemed to me a piece of grave historic justice, and the tailor carrying his own head to be as sober a verity as the legend of St. Denys.

The next play to which I was taken was *The Lady of the Manor;* of which, with the exception of scenery, very faint traces are left in my memory. It was followed by a pantomime, called *Lun's Ghost*—a satiric touch, I apprehend, upon Rich, not long since dead—but to my apprehension (too sincere for satire), Lun was as remote a piece of antiquity as Lud—the father of a line of Harlequins—transmitting his dagger of lath (the wooden scepter) through countless ages. I saw the primeval Motley come from the silent tomb in a ghastly vest of white patchwork, like the apparition of a dead rainbow. So Harlequins (thought I) look when they are dead.

My third play followed in quick succession. It was *The Way of the World.* I think I must have sat at it as grave as a judge; for, I remember, the hysteric affectations of good Lady Wishfort affected me like some solemn tragic passion. *Robinson Crusoe* followed; in which Crusoe, man Friday, and the parrot, were as good and authentic as in the story. The clownery and pantaloonery of these pantomimes have clean passed out of my head. I believe, I no more laughed at them, than at the same age, I should have been disposed to laugh at the grotesque Gothic heads (seeming to me then replete with devout meaning) that gape, and grin, in stone around the inside of the old Round Church (my church) of the Templars.

I saw these plays in the season 1781–1782, when I was from six to seven years old. After the intervention of six or seven other years (for at school all play-going was inhibited) I again entered the doors of a theater. That old *Artaxerxes* evening had never done ringing in my fancy. I expected the same feelings to come again with the same

occasion. But we differ from ourselves less at sixty and sixteen than the latter does from six. In that interval what had I not lost! At the first period I knew nothing, understood nothing, discriminated nothing. I felt all, loved all, wondered all—

Was nourished, I could not tell how—

I had left the temple a devotee, and was returned a rationalist. The same things were done there materially; but the emblem, the reference, was gone! The green curtain was no longer a veil, drawn between two worlds, the unfolding of which was to bring back past ages, to present a "royal ghost"—but a certain quantity of green baize, which was to separate the audience for a given time from certain of their fellow men who were to come forward and pretend those parts. The lights—the orchestra lights—came up a clumsy machinery. The first ring, and the second ring, was now but a trick of the prompter's bell—which had been, like the note of the cuckoo, a phantom of a voice, no hand seen or guessed at which ministered to its warning. The actors were men and women painted. I thought the fault was in them; but it was in myself, and the alteration which those many centuries—of six short twelvemonths—had wrought in me. Perhaps it was fortunate for me that the play of the evening was but an indifferent comedy, as it gave me time to crop some unreasonable expectations, which might have interfered with the genuine emotions with which I was soon after enabled to enter upon the first appearance to me of Mrs. Siddons in *Isabella*. Comparison and retrospection soon yielded to the present attraction of the scene; and the theater became to me, upon a new stock, the most delightful of recreations.

—Charles Lamb: "My First Play"

The most hasty perusal of these lines from Lamb betrays at once a fundamental quality of good criticism. Our first play, our first novel, our first view of the mountains, our first taste of an exotic fruit (I remember, with a peculiar feeling of satisfaction and delight, which might change greatly if I were again to have the pleasure, my first eating of fresh, ripe figs, cut up and served with cream,) our first sight of one of those huge monsters of steel that draw the transcontinental trains across the great divide, our first automobile, our first day in camp or on an ocean steamer, our first visit to a large hotel, all of them affect us as Lamb's first play affected him. We know nothing, understand nothing, discriminate nothing, but love all, feel all, and wonder at all the greatness or beauty or goodness of that solitary thing or incident that we have just seen or experienced. As the days and the years pass and example after example of the same sort becomes part of our experience; as, in other words, we gain more knowledge, we begin to make comparisons and discriminations; we begin to criticize. This play that we have just seen is not so good as was that one we saw a month or a year ago; the plot is not so logical, the characters are not so true to life, their conversation is too stilted, etc., etc. That novel is not so interesting or so well done as this other one because the style is not so pleasant, the thinking is incoherent, or the author is too didactic. The mountains of the West are grander

than those of the East: snow caps their heights, their peaks pierce the clouds, the air near them is purer and more wholesome. This new locomotive that the C. M. and R. Railroad has just purchased is just the thing for its Rocky Mountain Limited service: it develops so much more horse power, its greater weight makes its traction surer, it carries more fuel, its boilers are so constructed that it will cost less to operate it. Our last car is better than any that we have previously owned: it gives more mileage to the gallon, it does not choke with carbon, it will "pick up" more readily, it will take the highest hill "on high," etc. So one might go down the entire list of objects that can be criticized and be forced finally to the conclusion that the greater our knowledge of the subject under consideration, the more valuable is our criticism, provided always that some of the factors that have been noted above are present. Finally, however, this must be said, that criticism, without a previous knowledge of the subject to be criticized, is impossible or worthless. On the other hand, much knowledge about a particular notion or subject is presumptive evidence of the worth of the resultant criticism.

When, in a law suit, experts are called to testify regarding the matter at issue, or—to put it another way—are called to give their judgments or criticisms on the subject in dispute, they are first compelled to qualify as experts. That qualifying consists in an examination of the knowledge of the professed

expert. He must state how much knowledge he has on the subject; how he got it; and how much experience he has had in forming judgments in matters like those upon which he has been called to testify. No one would be called to testify to the handwriting of a manuscript who had not examined thousands of manuscripts and who had not made a complete study of the peculiarities of handwritings. None would be called to criticize or express his judgment on the mental capabilities of a prisoner who had not examined hundreds of men and women and had seen both those that were sane and those that were insane. Knowledge is always the first requisite of good criticism.

Analytical Ability. How shall I determine, when two objects are placed before me, which is the better? Suppose the articles be machines, or clothing, or books, or men! What means do I employ in making my selection? To answer this question is to state another of the fundamental processes of criticism.

Suppose a man has applied for a position. Knowing what the position demands, I begin to analyze the person before me. I ascertain something of the amount of knowledge he has; I examine his credentials to learn something of his training, experience, and ability; I test his tact; I inquire into his qualities of leadership. Then, I try to find out how he will respond to certain tests that I may apply to him. Finally, I endeavor to learn something

of his character. These, among other things, are the tests that I subject him to. In other words, I analyze the man before me in an endeavor to learn whether he will measure up to what is required of him in the position for which he has applied.

It may be that I am called to pass judgment on an automobile, possibly with the idea of purchasing it. Under these conditions, I pursue a similar course of examination. I look at the engine to find out how it works; I find out how much oil and gas it requires; I ask about the lubrication system, about the brakes, the clutch. Then I ask about the "turn-in" value, the cost of tires, and the like. I compare its lines and its equipment, as well as all other matters, with the other cars of which I know something. I analyze the car, and the value of my judgment depends not only upon my discernment and analytical ability, but also upon my general knowledge of automobiles as well.

Clothing, actions, principles, books, and all the other things that can be criticized are subjected by the critic to similar analyses. Analysis is an absolute necessity. Criticism that bolts at the object criticized is never satisfactory or satisfying. Criticism is good only when it results from the most careful examination of the thing criticized.

Clear Judgment. The ability to see things in their proper relations has just been discussed. The ability properly to evaluate what has been seen is also a cardinal requisite of the critic. For purposes of

designation—although any one of a number of other terms might be used—I have called this quality "clear judgment." It depends largely on the ability of the critic to see the object under consideration in its proper relation to the best examples of its class.

Clear judgment requires clearness of perception first of all. Once the object is seen in its true light, judging it rightly is a comparatively simple operation. I say "comparatively simple" because sometimes prejudice enters into the judgment. Since fairness is to be discussed in the next section, it is sufficient here only to call attention to it and to assert that clearness of vision—a quality without which clear judgment cannot exist—presupposes honesty of intent and absence of bias.

George Bernard Shaw, the dramatist and philosopher, in speaking of his equipment as a critic of mankind, suggests an interesting analogy between his physical and his mental ability. After telling of the fear that once possessed him that his eyesight was failing, he recounts a visit he made to an oculist. The oculist informed him, we are told, that he had perfect vision. Then, with that egotistical glee, so delightful in Mr. Shaw, once you have grown to appreciate him, he informs us that he thought little of the statement until he was further informed that only a very small percentage of the human race was so blessed. Follows then the suggestion that, because of his perfectness of vision, he is able to judge wisely.

Whether or not his conclusion is a true one, at least his analogy between physical and mental sight suggests a great truth. The eye, beclouded, myopic or hypermetropic, cannot see objects just as they are; nor can the mind beclouded by this ism or that prejudice, perceiving objects or designs only through the veil of selfishness or preconceived opinion, measuring all things by the puny standard of its own training and environment, too self-centered or too effusive in its disposition, be the mind of a great, or even of a fair, critic. Clear judgment demands clear mental and physical vision; it demands honesty and unselfishness; it demands, above all, open-mindedness.

This open-mindedness, which is so closely related to clear judgment that it is hard to differentiate it, I have considered at length in the next section under the general heading of Fairness.

Fairness. The old adage, "None are so blind as those who will not see," is a good warning for the critic to have before him. It should be a constant reminder to him that open-mindedness or fairness is one of the absolute essentials of the critic. *Ex parte* judgments are never to be admitted as criticism. The gentleman, who, discussing the Great War, said that the facts as they had been set forth were too partisan in most instances, and that Germany had not been treated fairly in apportioning the blame for the great conflict, and then remarked, "What we need is an impartial history of the war

from a Teutonic point of view," although he meant well, could scarcely be trusted to set forth or form judgments regarding any of the actions of the war from what is meant as a fair point of view.

In the next place, the real critic never lets his personal feelings enter into his judgment. His heart does not rule his judgment; his head rules it. He is, after a fashion, a machine, dividing the good from the bad. He should be somewhat like the mechanical devices that are employed for separating good articles of commerce from bad.

There is a simple machine that is used for separating good cranberries from poor ones. Pickers bring the berries, good and bad alike, from the bog to the packing house for sorting and shipment. Here it is necessary, first of all, that the bruised and rotting berries be separated from the good ones so that the perfect berries will keep longer. When one considers the great number of cranberries that are necessary to fill a barrel, one must realize that economy of time is a big factor in sorting them: it is impossible to pick them over by hand. Some device to do the work quickly, easily, and well is necessary.

Now, anyone who has had anything to do with cranberries knows that good berries are hard and round, and that, if allowed to fall from a slight height, will rebound like a rubber ball. Being round, too, they will jump off at an angle that is about proportionate to the angle at which they strike the ground or the table. A berry that has begun to rot

or that is bruised will fall dead: its resiliency has gone. These characteristics of cranberries are made use of in sorting them.

The apparatus is simplicity itself. An inclined plane, fitted with sides like a trough so that the berries cannot roll over the edges, leads toward a short table, also inclined in the same direction but at not so great an angle as the first plane. This second table is hard and smooth and leads into a trough at the lower end. Raised slightly above this second table, near the place where the trough begins, is a wide platform-like table that leads into a chute through which the good berries go to the packers. The berries are allowed to roll down the first incline in a steady but not too large stream so that they will fall off the end of the first incline. Those that are good bound off at an angle and fall on the broad table from which they are led by the chute to the waiting barrels to be collected and transported to market. Those that have some defect fall inertly on the lower incline and roll heavily into the refuse bin.

An arrangement of this sort is an admirable critic. It is no respecter of "cranberry persons." It demands certain qualities in the individuals that pass through it. It is entirely fair. It separates the good from the bad without prejudice.

The electro-magnet acts similarly. It is a detector of iron; and unerringly it selects from a heap of all sorts of junk only those articles that contain iron.

Other apparatus have been invented for similar selective processes. All of them do their work without favor or bias. They are all indicative of the quality of fairness that the critic should strive to approximate. I say approximate because, since we realize the frailty of man, we must be content to point out the ideal and exhort the individual to put from him as far as possible all prejudice.

That fairness is necessary in criticism no thinking person will deny; that it can be cultivated through the channels of knowledge, analysis, vision, and common sense is a matter of history; that it should be constantly striven for admits of no dispute.

A great many men have so trained themselves that they approximate an unprejudiced attitude. They, other qualities being equal, are the best critics. To the critic with an unbiased attitude toward life, everything must be examined to find out whether it is what it pretends to be or not; and *the thing examined is worth while or worthless as it measures up to or fails to measure up to what it pretends to be.*

The statement in italics in the preceding paragraph is one that the student of criticism should constantly bear in mind. Every object, every design, every action should be judged first on the basis of what it claims for itself or upon what its maker claims for it. A carpet sweeper cannot be condemned because it will not do the family wash; nor should a lawn mower be considered worthless because it will not cut hair. Carlyle criticized Sir Walter Scott's

novels because they did not have a moral purpose, a quality that Scott never intended that they should possess and a quality, moreover, that a mere story such as Scott wrote did not need. It is never fair for a critic to judge a product by what he thinks the product should be. Furthermore, such a proceeding puts a burden on the critic that it is totally unnecessary for him to assume. When he assumes this burden, he must first establish his own new set of criteria for the matter to be judged; then he must show that the matter that he is considering should be placed in this new category. When he has done so, and only then, is he able to begin to criticize. In other words he has made two unnecessary steps for himself. Furthermore, all his criteria may be wrong, as were those of Carlyle in his criticism of Scott.

It is only when the producer's standards cannot be justified that the critic must set up his own standards, justify them, and then show that the product does or does not measure up to the standards that should exist for this particular product. To judge the product by what the maker intends it to be or to accomplish is to be absolutely fair to it. Under these conditions the critic merely decides whether the maker has succeeded in doing what he set out to do or not. Therefore, when I read in a talking-machine advertisement, " . . . Records mirror magically the voice of the singer. The . . .

makes every record a joy, so pure and clear is its tone," I have a real standard by which to judge both record and machine. Likewise in the case of Ben Jonson, the Elizabethan dramatist, I have a standard by which to judge his plays when he tells me in his prologues of the first two plays what he believes plays should be.*

Common Sense. The last of the qualities that should be possessed by the critic, although it is by no means the least important, is what I have chosen to call "common sense." This quality belies its name: it is one of the most uncommon qualities in existence. Besides, it is one of those abstract qualities or ideas that one feels but that one cannot define with exactitude. It is the sum of a great number of the attributes that go to make up the good critic: understanding, sound judgment, correct perception, clear reasoning, keen appreciation of both sides of all questions, together with some knowledge of human frailty. "Good sense," as Alexander Pope designated what is here called common sense, is, in his opinion, "the gift of Heaven." It is that quality which enables a critic to view all things with sanity and reasonableness. It is that quality which enables the critic to realize that perfectness is something to be striven for, but that it is seldom attained. It is that quality in the

* There are, it is true, certain standards that have grown up as a result of the practice of the ages. These and their application are discussed on pp. 122 ff.

critic that might be called the "human touch." It is that quality that, recognizing human weaknesses, lets fall the blow of condemnation but lightens it as it falls. Pope sums up the idea:

> Whoever thinks a faultless piece to see,
> Thinks what ne'er was, nor is, nor e'er shall be.
> In ev'ry work regard the writer's End,
> Since none can compass more than they intend;
> And if the means be just, the conduct true,
> Applause, in spite of trivial faults, is due;
> . . . . . .
> Avoid Extremes; and shun the fault of such,
> Who still are pleas'd too little or too much,
> At ev'ry trifle scorn to take offense,
> That always shews great pride, or little sense.
>
> —Alexander Pope: *Essay on Criticism*

Kinds of Criticism. The following pages are designed to acquaint the student with the various attitudes that the critic may assume in making his judgments. In its proper place and under the limitations that the honest critic applies to himself, each of the following kinds of criticism may be justified. All of them are noted and explained, however, so that the student may understand their respective values and be able to appreciate their worths and their limitations.

Ordinarily, criticism is divided into three kinds:

1. Historical criticism
2. Personal or impressionistic criticism
3. Criticism by fixed standards

Historical Criticism. I can recall vividly the beginnings of automobiles and moving-picture machines. What top-heavy, crude-looking affairs those first automobiles were! They looked like nothing else than ordinary carriages (built a little heavier, perhaps) that had been bereft in some unaccountable way of their shafts and that were being propelled just as unaccountably from behind by some unseen force. If only a sail had been hoisted on a mast behind the driver, most of us would have felt more comfortable, both in mind and body. Along the highways they chugged at a fairly good rate of speed although they looked as if at any minute they might topple over forward in a rather awkward somersault. In their day, they were wonderful affairs; and too much praise cannot be bestowed on them. Today, they are antiques; their place is in a museum. They have no lines; they have no power; they have no speed as compared to our beautifully built, high-powered cars. Then, too, how the pictures from old motion-picture projectors jumped and wobbled on the screen in the days before they were perfected! How well we recall them! Consequently, when we begin to criticize these old models, almost unconsciously we say, "Oh yes, I suppose that *in their day*, they were fine affairs, but——." The words in italics are proof that we recognize the place of what is known as historical criticism.

Historical criticism may be defined as the kind of

criticism that judges an object or an idea on the basis of the knowledge, the customs, and the conditions of the age that produced it. Historical criticism presupposes on the part of the critic an acquaintance with the conditions under which the object or idea came into being and a knowledge of the materials, intellectual and physical, that the producer had at his disposal. To put it another way, the historical critic should put himself, for the time being, into the age from which the product that he has to criticize has come and judge the product from the point of view of that age.

Besides the automobile and the moving-picture machine mentioned above, think for a minute of the first locomotive that ran over the road from Carbondale to Honesdale in Pennsylvania. Its fuel was wood. It made about as good time as does the modern tractor with its caterpillar treads. In its day, however, when coal and oil and electricity were unknown, that engine, with its rickety four-wheeled cars, open to wind and weather, was a wonderful thing to see. Too much praise cannot be bestowed on it and on its inventor. What if it did experience difficulty in making its way up an ordinary grade? What if its brakes did not always hold on the down slopes? What if all the curves had to be taken on "low"? What if it had to be re-watered and re-fueled many times on a short run? In its day, that locomotive was even more remarkable than our enormous oil-burning transcontinental

locomotives that draw long, heavy Pullman trains at whirlwind speed. It was the beginning; it was the first step. To the railroad, it was as remarkable as baby's first step is to baby—and it is one of the wonders of life, even though that first step is repeated in a million homes each year.

The years that have passed since the first heating of a carbon filament in a vacuum tube produced an incandescent light, yellow and insufficient, have not detracted from the value of the discovery nor from the wonder of that first electric bulb.

In the field of mechanics and invention, we recognize with some ease the truth of the facts that have just been stated. In the field of politics, morals, religion, and literature, we are not likely to recognize the truth of the statements so readily. This is true because we cannot easily appreciate the fact that mental and social conditions and literary excellences are growths just as are scientific attainments and mechanical apparatuses. That politics, morals, religion, and literature are products of their respective ages, that their natures depend on national and local environment, is evident to anyone who will trouble himself to think about the matter. The Roman political boss cannot be condemned because he did not practice the refined methods of the Borgia; the American Indian is not to be censured because he retaliated on the settler with bow and arrow and fire rather than by selling him for good money plots of worthless ground in a

far-off swamp, as his more carefully trained and more morally perfect descendant of this day might have done; nor is the work of the Romanic of southern Europe or the battle-fierce Anglo-Saxon of the tenth century to be reproached because it did not possess our artificial veneer of morality or our very superficial polish.

These various illustrations will make it plain that historical criticism demands that the work criticized be approached in the light of the conditions that surrounded it at the time it was produced.

The Personal Standard in Criticism. It must be acknowledged that all of us, no matter how we try to overcome them, have certain biases or warps that often cause us to see things awry. These warps may be called "humors" as Ben Jonson called them, or they may be called "beliefs." They may be thought of as types of mental spectacles that tint or distort what we see in such a manner that our vision is no longer clear and true. Call or think of this quality as you will, it is this indefinable something that plays a prominent part in what I have called personal criticism. Personal criticism needs to be scrutinized with great care whenever it appears. The injustice of this kind of criticism is often most difficult to detect because its authors, usually under cover of apparent fairness and with the most disarming words, try to disguise as much as possible the radically personal element in their criticism; for they know that what they offer is not an honest criticism

based on the ascertainable facts, but a dishonest opinion based on purely personal ideas and prejudices.

Nevertheless, under some conditions this type of criticism is valuable. If we are able to get at the basic ideas of the critic and find out his training and previous ideals, we are able, through that knowledge, to appraise the "percentage of probable error" that exists in his mind and consequently in his criticism. Suppose he happens to be a critic of literature and his one desire is to secure a large circulation for his book by giving the public what it wants. To do this, he puts his ear close to the ground, listens intently for every sound that might betray what that public he is wooing desires, and then goes forth to his work accordingly. That sort of critic no longer sees things fairly; he sees them through a haze of probable dollars and cents. Suppose, on the other hand, that the critic is not mercenary and has not sold his soul to Mammon, but that he has been reared in a "Pollyanna-like" atmosphere; then everything that is pleasant to him becomes perfectly lovely, and he shuts his eyes to all that savors of the unpleasant side of life. Suppose that he has frequent attacks of indigestion and that he allows his mental vision to become clouded by his physical infirmities; then his rather Jeremianic view of all that he sees is as untrustworthy as is the golden-hued view of the Pollyanna. Try, if you will, to get the ordinary salesman of a particular brand of goods to give you a criticism of

a competitor's goods. In most instances, the vision of a probable lost sale so warps his opinion that it is worthless. Frequently, when firms or business houses ask for recommendations for applicants, they request that the recommender state what relationship he bears to the applicant. Back of this request is the suggestion of possible bias that might prompt the relative to gloss over deficiencies in the person he recommends. The student should always endeavor to learn the state of mind, the probable prejudice, or the bias that exists in the mind of everyone who passes judgment on acts, commodities, or men.

Sometimes, this type of criticism is known as impressionistic criticism. In this designation, the purely personal nature of the criticism becomes at once apparent. It is no longer a question as to whether or not analysis of the thing criticized has proved or disproved its worth, but rather whether the examination proves it pleasant or unpleasant to the critic. It is purely subjective in its nature. It is as though I were to reject a perfectly "sure fire" rat trap because its outward appearance did not appeal to my idea of the aesthetic. Impressionistic criticism is as treacherous as the shifting sands to those that place dependence in it. Its worth depends too much on the corrections that one must make in it. It is worth while only in so far as it gives us a close-up view of the critic. It is worthless for the most part as criticism in that it has no real standards

—each critic, with his likes and dislikes, is a law unto himself.

Criticism by Standards. Although criticism must always keep a proper historical perspective, nevertheless, out of the great mass of ideas and opinions that the ages have stored up, arise gradually, for every activity and every form of article and thought, certain well-defined standards that, even though they are ideal, are the criteria by which every object in a class is ultimately to be judged. It cannot be denied that personal feeling and opinion enter in some degree into every criticism, because nothing can be wholly objective where human beings are concerned. Furthermore, it is this personal touch that adds spice to criticism and gives it the verve and force that it possesses. It is this personal touch that endues it with the charm that it would not otherwise have. The permanent worth and value, however, that anything possesses depend nevertheless not on the way in which the criticism of it is presented, nor on the likes or dislikes of the moment or the age that gives it birth, nor on the favorable or unfavorable report of this or that individual critic. Rather its value depends on the manner in which it measures up to the indubitable standards that the ages have set for it.

Matthew Arnold, speaking it is true only of literary criticism, nevertheless defined the function of criticism in every field when he asserted: "Criticism is making known the best that has been

thought and said in the world." At first glance that statement does not seem to be inclusive enough, but a little closer examination discloses that it contains all the elements necessary in criticism. It suggests first the cataloguing of the excellences or idealities that go to make up the best example of the class of objects or ideas to be criticized. This is the discovery of the standards of the product. In the next place the statement suggests that, for the individual object, criticism is the attempt to learn by careful examination how closely it approaches the ideal and then to make that closeness known. This is not only the function of criticism, but the best practice as well.

Critical standards, it is true, vary somewhat from age to age. Like everything else, they do not stand still; they develop and demand greater things with the passing years. These developments are usually matters of detail and vary with the new demands that are made on the object. Business, because of its complexity, requires methods of filing and recording that were unnecessary a century ago. But the clerk of 1800 had to be able to find quickly what he was asked for, just as does the clerk today. The accessibility of the records was then as now the standard of the usefulness of the system. The invention of the typewriter and its development has made for larger correspondence and neater records, but the standard of legibility was just as important in 1700 as it is now. The essential standards, in all

matters, exist regardless of the passage of time; the detailed requirements of a particular age demand more of the product of that age than were demanded of a similar product in a previous age.

William James, in discussing the value of a college education, concludes that its chief merit is to be found in the standards that it sets up in one's mind concerning men. He states that its prime object is to teach one how to know a good man when he sees him. In working out his idea he tells us that a good plumber knows a good job of pipe fitting when he sees it and a good machinist can recognize a good job of mechanical workmanship. He might also have said that, in any trade, the expert must know not only the good job, but also the poor one. How does he know what is good from what is bad? Therein lies the crux of all criticism. Through the ages, artisans have built up a system of more or less definite principles or ideals that apply to the best workmanship in plumbing, printing, masonry, engine building, and the like. These criteria apply wherever the particular artisan's trade is pursued. They are the indisputable marks that determine whether a particular example of that craftsman's art is well done or not. The expert uses these age-long standards in making his criticism of any piece of work. They are his guides. Just so, James concludes, it is with the well-trained college man. Since the object of the college is to study mankind in its infinite varieties and to study nature

as it relates to man, the best-equipped college graduate is he who has learned most about his fellows, here and elsewhere, now and in the past. On the basis of this learning, he has built up for himself a group of principles as to what a good man should be. With these standards firmly fixed in his mind, he can judge those with whom he comes into contact and pick the good from the bad.

It is to be noted that criticism of this sort is not an emotional or a sentimental affair. It is not affected by money or morals or prejudice of any kind. It is entirely a matter of mentality. It connotes a large body of criteria based on accurate knowledge; it connotes a brain that knows how to think and to discriminate; and finally it connotes a complete mental equipment that has been trained to observe, to analyze, and to form judgments.

This side of the matter of criticism cannot be too strongly stressed. If criticism of this sort lacks the warmth of imagery and conceit of rhythmic prose, if it lacks the sparkle that should accompany the brilliant prose of the master of description or narrative, it is because it must be cold-blooded in its appraisal and in its judgment. If it does not always please, it is to be remembered that it is—when rightly applied—as lacking in sentiment as are the laws of nature.

The only difference between true criticism and the working of the laws of nature lies in the humanitarianism that may actuate the critic. To be sure,

he may snarl or sneer if he be so inclined; he may be bitingly satiric or terribly caustic if the humor is on him; or he may soften the heavy blow by kindliness of tone or by delicacy of phrasing and tactfulness of approach. Nevertheless, if he be a true critic—and an honest one—his decision, no matter what tone he employs, will be as uncompromising as the ways of nature and as inflexible as the Procrustean bed.

Everything that is criticized—and what that exists is not!—has its own standards of excellence. What is required of the marine engine is not what is demanded of the locomotive engine, although both have certain characteristics that are common to all engines. The tennis ball, the baseball, the cricket ball, and the golf ball have particular standards that apply to each of them individually, although they all have this in common: they are designed to be struck at by some sort of club or racket. The standards that apply to each of them, however, are so precise that no match game of any of the sports in which they are used is played unless the balls used conform to those standards.

The question of standards is the question of authority in criticism. No one can speak with authority unless, by long observation and by the acquisition of much knowledge, he has succeeded in making part of himself some of the essential and unchanging standards that have asserted themselves as the indispensable requirements of the particular

productions in which he is interested. After these standards have been built into the mind, criticism becomes a mere act of the reasoning faculty and the judgment. The critic sets over against the standard the object to be judged and makes his comparisons and his contrasts.

What has been said so far has been concerned primarily with criticism as it is applied to persons, material things, and ideas. There is a large body of literature that is concerned chiefly with books and writings. This is known as literary criticism.

Literary Criticism. Literary criticism has been touched on briefly in the section on Book Reviews (cf. p. 83). It has also been suggested during the course of this chapter. It has not been considered until this time, in order that the student may not be inclined to confuse his terms and think of criticism only as applying to books. It is, however, a very interesting form of criticism.

Literary criticism differs from the book review in that it is less ephemeral. It is intended to be more reasoned and therefore more correct. Unlike the book review, it assumes that its readers already have some knowledge of the book under discussion. Proceeding from this assumption, it makes its comments and points out good and bad qualities in the book before it. In its evaluation, it uses any of the methods that have been discussed above. It is most valuable when it combines in happy

proportions the historical, the personal, and the standard methods.

What follows is an excellent, brief criticism of Shakespeare's *Twelfth Night*. Notice especially that it presupposes a fairly complete knowledge of the play itself.

TWELFTH NIGHT

This is justly considered as one of the most delightful of Shakespeare's comedies. It is full of sweetness and pleasantry. It is perhaps too good-natured for comedy. It has little satire, and no spleen. It aims at the ludicrous rather than the ridiculous. It makes us laugh at the follies of mankind, not despise them, and, still less, bear any ill-will toward them. Shakespeare's comic genius resembles the bee rather in its power of extracting sweets from weeds and poisons, than in leaving a sting behind it. He gives the most amusing exaggeration of the prevailing foibles of his characters, but in a way that they themselves, instead of being offended at, would almost join in the humor; he rather contrives opportunities for them to show themselves off in the happiest lights, than renders them contemptible in the perverse construction of the wit or malice of others . . . This may be called the comedy of nature and it is the comedy which we generally find in Shakespeare.

—William Hazlitt: *Characters in Shakespeare's Plays*

Art criticism as applied to the work of one person is illustrated by the selection which follows:

GAINSBOROUGH

When such a man as Gainsborough arrives to great fame, without the assistance of an academical education, with-

out travelling to Italy, or any of those preparatory studies which have been so often recommended, he is produced as an instance, how little such studies are necessary; since so great excellence may be acquired without them. This is an inference not warranted by the success of any individual; and I trust it will not be thought that I wish to make this use of it.

It must be remembered that the style and department of art which Gainsborough chose, and in which he so much excelled, did not require that he should go out of his own country for the objects of his study; they were everywhere about him; he found them in the streets, and in the fields; and, from the models thus accidentally found, he selected with great judgment such as suited his purpose. As his studies were directed to the living world principally, he did not pay a general attention to the works of the various masters, though they are, in my opinion, always of great use, even when the character of our subject requires us to depart from some of their principles. It cannot be denied, that excellence in the department of the art which he professed may exist without them; that in such subjects, and in the manner that belongs to them, the want of them is supplied, and more than supplied, by natural sagacity, and a minute observation of particular nature. If Gainsborough did not look at Nature with a poet's eye, it must be acknowledged that he saw her with the eye of a painter; and gave a faithful, if not a poetical, representation of what he had before him.

Though he did not much attend to the works of the great historical painters of former ages, yet he was well aware that the language of the art—the art of imitation—must be learned somewhere; and as he knew that he could not learn it in an equal degree from his contemporaries, he very judiciously applied himself to the Flemish School, who are undoubtedly the greatest masters of one necessary

branch of art; and he did not need to go out of his own country for examples of that school: from that he learnt the harmony of coloring, the management and disposition of light and shadow, and every means which the masters of it practiced, to ornament and give splendor to their works. And, to satisfy himself as well as others how well he knew the mechanism and artifice which they employed to bring out that tone of color which we so much admire in their works, he occasionally made copies from Rubens, Teniers, and Vandyck, which it would be no disgrace to the most accurate connoisseur to mistake, at the first sight, for the works of those masters. What he thus learned, he applied to the originals of nature, which he saw with his own eyes; and imitated, not in the manner of those masters, but in his own.

Whether he most excelled in portraits, landscapes, or fancy pictures, it is difficult to determine: whether his portraits were most admirable for exact truth of resemblance, or his landscapes for a portrait-like representation of nature, such as we see in the works of Rubens, Ruysdaal, and others of those schools. In his fancy pictures, when he had fixed on his object of imitation, whether it was the mean and vulgar form of a wood-cutter, or a child of an interesting character, as he did not attempt to raise the one, so neither did he lose any of the natural grace and elegance of the other; such a grace, and such an elegance, as are more frequently found in cottages than in courts. This excellence was his own, the result of his particular observation and taste; for this he was certainly not indebted to the Flemish School, nor indeed to any school; for his grace was not academical or antique, but selected by himself from the great school of nature; and there are yet a thousand modes of grace, which are neither theirs nor his, but lie open in the multiplied scenes and

figures of life, to be brought out by skilful and faithful observers.

—Sir Joshua Reynolds: *Discourse XIV*

Sometimes, a criticism is directed against a principle or course of action. Of this nature is the following article:

ON A CERTAIN CONDESCENSION *

Not from Brookline but from London comes the incredible story that the stout heart of Amy Lowell was broken by the strictures of the British reviewers on her great life of Keats. It seems likely that this yarn will gain wide credence. The poet and the poet's biographer, herself a poet, both killed by critical unkindness—the parallel is irresistible. Yet whatever resentment she may have felt toward the dilettanti whose languid complaints so often usurp in the English journals the function of critical scholarship, Miss Lowell was too happy a warrior to let them crush her. She was ever a fighter; she had not won through the long contention which preceded the recognition of her own poetry and her poetical creed without forging armor for her sensitive spirit.

She knew well enough what to expect. She knew, of course, that like the Dreadnaught, the pre-Washington post-Jutland Superdreadnaught, and the Nelson Touch, the two-decker biography was honestly regarded by the insular literati as a peculiarly British institution. There are no perturbations on that island over the appearance of a transatlantic monograph on some obscure and prosy cleric from the less humane of the mediaeval centuries. But that America should come forward with two corpulent volumes, offered definitively, on one of the chief

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glories of English poetry—that was too much. Americans, thought the reviewers, are useful—in their place. They discover, and uncover, and resurrect; they are absurdly willing to snuff whatever emanates from the dusty ossifications of philological provenience. We shall use them as formerly we used the Germans from whom their theory of scholarship is derived; but the cloud-capped towers of our gorgeous palace of literary history we prefer to decorate ourselves.

Academia everywhere in 1925 lags decades if not generations behind the quickstep of events and even the route step of other institutions. The wind that blows through the rest of the world rustles the arras of the learned halls gently and regretfully, if indeed it penetrates at all. The academic reluctance to march is probably more serious in Great Britain than here, for British universities are successful champions of lost causes which never trouble the foreman of our American factories of pedagoguery.

Politically, England has long accepted America. At Washington, with a gesture magnificent, she admitted the star-spangled navy to an unexampled parity with her own. Her statesmen, Liberal and Tory, fondle us at Pilgrim dinners; and her journalists, Liberal but not Tory (see any number of the Manchester *Guardian*), display an ingenuity without parallel in the history of the printed word by setting forth in the most favorable of all possible lights our various peccadilloes such as safe blowing, lynching, corrupting cabinet ministers, abolishing evolution, and shaking hands with royalty. But what the politicians have done the dons will not do. Typical of the British posture toward American scholarship is the reply of the British professor to the question of an American student's tutor, "Do you think Blank will ever make a scholar?" "Oh yes, an American scholar."

Partly the British reluctance, for it is reluctance rather than hostility, comes, as Professor Brander Matthews has recently pointed out, from sheer insularity. Any American scholar feels the keenest chagrin if in a book or article he fails to take account of significant work by any British, German, or French colleague. But too frequently the British scholar works on in proud ignorance that his special patch of English literature has also been cultivated across not only the English Channel, but the Atlantic Ocean, not to mention the North Sea.

Some years after the appearance of Professor Thorndike's book, *Shakespeare's Theatre*, an island scholar produces an inferior volume covering precisely the same ground; he is apparently not dishonest, simply ignorant of Thorndike's existence.

With bland unconsciousness of Auguste Angelier's monumental *Burns*, an Englishman brings forth a full-dress life, "the measure of which," observes M. Aynard in the *Revue Anglo-Americaine*, "may be taken by the fact that though Angelier's book had been out for several years, the hardy biographer '*ne le connait pas, ne le cite pas une fois. L' a-t-il meprise ou ignore?*'"

Within a year or two one of the most eminent professors of literature in England has reiterated a fantastic theory about Shakespeare which he would never have embraced had he read any one of a couple of dozen German doctoral dissertations dating variously from about 1880 to within a a few years, or even a modest article by an American investigator which appeared several years ago in the leading philological journal of this country and has been included in all the annual bibliographies of English studies for that year.

One of his most obvious duties the American scholar conceives to be the keeping up with periodical literature in his special field. Few British scholars make any serious

attempt to do this. And so M. Legouis horrifically flutters the insular dovecotes when his monograph on Spenser indicates the best work on that overrated bard as appearing in the philological journals of the United States.

British ignorance of American critical activity is so consistent that many a reviewer approaches an American book much as Stuart P. Sherman approaches a volume of contemporary poetry. In both cases there is an elegant curiosity coupled with profound suspicion. Mr. Sherman does not so much wonder that the poet is no better as that anyone not dead but yet alive should presume to sing; while the British reviewer is less outraged by the real defects of an American book than by the appalling spectacle of a contribution to British learning couched in an idiom occasionally non-British.

Thus a recent review of an American *History of the British People* engagingly suggests "There are few who will not find a curious piquancy in this American observer's comments, and a peculiar quaintness in his picture of the Old World, like the quaintness of a child's drawing." This book is the work of an eminent professor of history in one of the most distinguished institutions of this country. The author, himself an Englishman by birth, approaches his subject with a general cultural equipment conspicuously broader than that of the average professional historian. The wide adoption of his book in American colleges makes the criticism of this reviewer an insult to the intelligence of teachers of history all over America.

Characteristic of the tone of another regular reviewer of American contributions is the branding as "interesting to an English reader" of those hideous Americanisms, "to *leaf through* the volume" and "dates and events do not exactly *jibe*." This curt remonstrance is not excerpted from *Punch*, but from a professedly sober periodical devoted to the more arid purlieus of philology.

During the War Mr. Galsworthy thought it worth while to write an essay apologizing for a certain British officer's "Really!" in response to an American officer's casual bromide that Uncle Sam and John Bull were joining hands to "clean up Brother Boche." Mr. Galsworthy saw the friendship of nations endangered by such needless insolence. Since the Armistice the military guilds of both countries have learned mutual courtesy. The pedants still trail. We ought, perhaps, to thank them for their linguistic conservatism, for nothing is despicable that helps to dam the flood of American journalese now depraving the great London newspapers and subtly leveling the native idiom out of the French and Italian printed in the dailies of Paris and Rome. Surely some of the light from the new torch on Bush House emanates from the purity of the common language. To be insulted gratuitously is a slight martyrdom for Americans who value good English and know that its future depends upon friendly correspondence among the old Empire, its young colonies, and the adolescent Republic.

But it is only the stupid who perpetrate wanton insults, and stupidity is the last thing the wise gods excuse. No amount of critical liberality will ever clear Gifford's name of the odium he incurred by damning Keats. It is just possible that some contemporary reviewers have earned an immortality of disgrace by the insularity that sneered at one of Keats's best biographers, and barbed the insult with a gibe at the artistic English in which she wrote.

A nationalistic obsession is a poor substitute for critical acumen. The *New Statesman* is one of the few journals in England which avoid that maudlin monotone, and can balance a just review beginning with the remark that a certain American professor "has the mind of a child" by another frankly recognizing an American publication as brilliant and definitive. Severity and habitual suspicion

are the last qualities that Americans would take away from British reviewers. We know only too well that for every university with the standards of Aberystwyth and Durham in Great Britain there are fifty in this country, and that for every dull and lazy impostor in scholarship and letters in England there are a score in America.

The insularity of British critics is, after all, nothing very serious in the eyes of the laughing person in the heavens. It did not prevent Whitman from being better known in England than in America. It has never been an obstacle to British appreciation of democratic dogma in Emerson, Lincoln, Whitman, Twain, and Lindsay. As has been suggested, it is capable of starting real conflagrations only in the more arid purlieus of philology. There it has become a public nuisance.

Not yet are the remedies in sight, though the Modern Humanities Research Association, a British organization which is scrupulously eschewing insularity, is doing yeoman's service with its annual bibliographies. British hospitality to American students has done little, for the records of the few really able Rhodes scholars have been canceled by the ineptitude of the majority, who, as one tutor put it, "never, in the course of their three years at Oxford, discover what their motives were or ought to have been in coming there."

Perhaps the cure may result from American hospitality to British savants. Several of the most distinguished are now teaching at various summer sessions in this country; three are to lecture at Harvard during the ensuing year. The greatest of living English lexicographers will be at Chicago, and one of the best-known of the Scottish professors is soon to visit the University of California. These men will encounter much that grieves all the judicious. But they will find better working libraries than any in England except the British Museum and the Bodleian.

They may find their best American colleagues better acquainted with continental ideas than they are themselves. And they will find that greatest of all inducements of mutual respect—real appreciation of their own scholarly contributions.

These British guests of the present and near future are not insular in spirit; but if they were, their insularity would inevitably melt. The question soon to be answered is this: Will British academic and literary insularity be aggravated or cured when, as is bound to happen, considerable numbers of second- and third-rate teachers of literature from overseas make the acquaintance of our second- and third-rate American colleges and universities?

—Merrit Y. Hughes and Hazelton Spencer: *The New Republic* for August 12, 1925, p. 317

Mr. Gale's criticism which follows is an examination of the work of several authors for the purpose of contrasting them.

SEA THEMES IN MODERN ENGLISH VERSE

An insular country like England is bound to produce poets who are preoccupied with the sea. Some of them use the sea for decorative purposes, others utilize the heroic tradition of the sea for inspiriting narrative verse, and some few who have first-hand experience and artistic genius enough, attempt to make the sea real.

Alfred Noyes' treatment of the sea is romantic. Take his epic poem *Drake* for instance. He pictures Drake at heroic moments, striding about a ship manned by sailors who sing rollicking songs with their right hands on their "tummies" and the left on their backs—and reverse. His sea exists only on canvas—the kind of idealized sea that Wallace Nutting might paint.

How the seamen in Drake's day did enjoy the dangers of seafaring! No mutinies, or harsh looks at their commander or from him. Observe how zestfully the ship leaves port:

> Their crews, all told, were eight score men and boys,
> Not only terrors of the deep they braved,
> Bodily witchcrafts of the black abyss,
> Red gaping mouths of hell and gulfs of fire
> That yawned for all who passed the tropic line;
>
> . . . . . .

Then we have a softly poetic figure defining the spirit in which they departed. How robust it is!

> . . . . . They went out
> To danger as to a sweetheart far away,
> Who even now was drawing the western clouds,
> Like a cymar of silk and snow-white furs,
> Close to her, till her body's beauties seemed
> Clad in a mist of tears.

Scattered through his poem *Drake* are a number of lyrics that have a good singing quality—the rhythm that one associates with the sea—but it is the music that impresses. The following extract illustrates Noyes' ability to represent the sound of the sea realistically:

> Each heart beat, while the low, soft, lapping plash
> Of water racing past them ripped and tore
> Whiter and faster, and the bellying sails
> Filled out, and the white cliffs of England sank
> Dwindling behind the broad grey plains of sea.

The descriptions of the sea are all glossed over with romantic glow. His description of dawn is an example:

> Now like a wild rose in the fields of heaven
> Slipt forth the slender fingers of the Dawn
> And drew great grey Eastern curtains back
> From the ivory saffroned couch.

The nearest he comes to touching the sea realistically is in "Forty Singing Seamen." It is the lilt of the music and the humor that makes them seem more real.

There was music all about us, we were growing quite forgetful,
We were only singing seamen from the dirt of London town,
Though the nectar that we swallowed seemed to vanish half regretful
As if we wasn't good enough to take such vittles down,
When we saw a sudden figure, tall and black as any nigger,
Like the devil—only bigger—drawing near us with a frown.
Cho: Like the devil—but much bigger—and he wore a golden crown!

Noyes' interest seems to be in idealizing national heroic figures of the sea. He prefers to treat them in a narrative form. Henry Newbolt, on the other hand, although he idealized heroic figures, and selected only the big moments of sea life, did not treat them in narrative verse, but rather made them the subject for lyrical outbursts. He has, however, a few narrative poems that are in tone eulogistic of some heroic act. An example is "Craven Mobile Bay, 1864." Newbolt narrates in glowing terms the last-minute drama enacted just before the ship sinks. There is a chance for one of the two remaining men to be saved.

They stood like men in a dream: Craven spoke,
Spoke as he lived and fought, with a captain's pride,
"After you, Pilot." The pilot woke,
Down the ladder he went, and Craven died.

Like Noyes he catches the spirited note of the sailor's chanties. "The Bright Medusa" has a real lyrical quality.

She's the daughter of the breeze,
She's the darling of the seas,
And we call her, if you please, the bright *Medus-a;*
From beneath the bosom bare
To the snakes among her hair
She's a flash of golden light, the bright *Medus-a.*

The sailors that Newbolt imagines for us seem always to be singing such cheerful songs. The lyrical optimism and zest for life in "The Fighting Téméraire" is contagious.

It was eight bells ringing
For the morning watch was done,
And the gunner's lads were singing
As they polished every gun.
It was eight bells ringing,
And the gunner's lads were singing,
For the ship she rode aswinging
As they polished every gun.

Oh! to see the linstock lighting.
Téméraire! Téméraire!
Oh, to hear the round shot biting
Téméraire! Téméraire!
Oh, to see the linstock lighting
And to hear the round shot biting
For we're all in love with fighting
On the fighting Téméraire.

"Drake's Drum," Newbolt's most widely known poem, recaptures for us the heroic qualities of Drake. While he makes Drake out a hero, the vigor of his language and music makes it a more convincing treatment than the more softly poetic treatment of Noyes. Herein lies the difference it seems to me: that while Noyes and Newbolt both chose the more noble and admirable phases of sea life, Noyes indulges in pretty figures and colorful description which altogether soften the picture, and Newbolt lets the heroic deeds, slightly idealized, stand for themselves. Newbolt's "Drake's Drum" like Noyes' "Forty Singing Seamen" gains by the use of inelegant speech.

Drake he's in the hammock an' a thousand-mile away
(Captain, art thou sleepin' there below?),
Slung atween the round shot in Nombre Dios Bay,
And dreamin' 'arl the time of Plymouth Hoe.

Yarnder lumes the Island, yarnder lie the ships,
Wi' sailor lads a-dancin' heel and toe,
And the shore lights flashin' and the night-tide dashin'
He sees et 'arl so plainly as he saw et long ago.

One is apt to say, when he first picks up the sea verse of Kipling, "Here is a man who knows the sea from first-hand experience." Kipling is a journalist with a journalistic eye for dramatic material in everything that comes within range of his vision. Further he is a descriptive and narrative genius, able by his craftsmanship to make a little information go a long way! "The Ballad of Fisher's Boarding House" bears this out. It is the hardened seamen on land that he uses. Anne of Austria, according to port law, belonged to Salem Hardieker for the week end but she coveted Hans, the blue-eyed Dane. Repulsed by him, she seeks revenge.

A scream—a sob—"He called me—names."
And then the fray began.

The innocent Dane was overcome and we get a dramatic dénouement.

"South, down the Cattagat—What's here?
There-are-no-lights-to-guide!"
The mutter ceased, the spirit passed,
And Anne of Austria cried,
In Fultah Fisher's boarding house
When Hans the mighty died.

Thus slew they Hans, the blue-eyed Dane,
Bull throated, bare of arm,
But Anne of Austria looted first
The maid Ultruda's charm—
The little silver crucifix
That keeps a man from harm.

Another example of his use of sea life for artistic material is the really powerful narrative "The Mary Gloster." It is the death story of Anthony Gloster—a man who has risen

by perseverance of himself and the nagging of his wife, to a man of property.

> I took the chances they wouldn't, and now they're calling it luck.

He is bitter and disillusioned: his wife is dead; his son, like most sons of self-made men, is a bitter disappointment; and he reviews for his son his own hard life on the sea and land and pleads to be taken back to the sea for burial. His wife was buried there, and he wishes to be dumped overboard in the same place. His story is told with all the baldness of the real seaman who calls a spade a spade.

Kipling, too, has his poem about Drake. He pictures him from the point of view of the sailor—a severe test for any captain—and Drake stands it.

> South and far south below the Line
> Our Admiral leads us on,
> Above, undreamed-of planets shine—
> The stars we knew are gone.
> Around, our clustered seamen mark
> The silent deep ablaze,
> With fires, through which the far down shark
> Shoots glimmering on his ways.

Kipling has some stirring sea lyrics written with vigor and spirit. There is a refrain in "The Merchantmen" that is quotable.

> Coastwise—cross-seas—round the world and back again—
> Where the flaw shall head us or the full Trade suits.
> Plain-sail—storm-sail—lay your board and tack again—
> And that's the way we'll pay Paddy Doyle for his boots!

Kipling gets his realistic effect by his knowing use of sea terms and specific mention of sea things. He presents in dramatic form some of the coarser sides of the life and thus gains a greater respect for his knowledge.

It is Masefield, of course, who is the sea poet *par*

excellence. There is no doubt about his familiarity with his material. But how the seamen have changed since Drake's time! In one of Newbolt's poems he relates the death of a mate. It is a glorious adventure for him and his mates, too.

> He gave us a good-bye cheerily
> At the first dawn of day.

How different is the passing of Masefield's Bill.

> He lay dead on the cluttered deck and stared at the cold skies,
> With never a friend to mourn for him nor a hand to close his eyes:
> "Bill, he's dead," was all they said: "he's dead, 'n there he lies."
> The mate came forrard at seven bells and spat across the rail:
> "Just lash him up wi' some holy stone in a clout of rotten sail,
> 'N, rot ye, get a gait on ye, ye're slower'n a bloody snail!"

. . . . . .

We should like to believe that Newbolt is right—that his case is the rule and that of Masefield an exception—but we dare not. At any rate, Bill defines the side of the sea life that Masefield is most acquainted with. "Fever Chills" and "Fever Ship" emphasize the same side of a sailor's life—hard, calloused, and rough.

He writes of the sailor on shore, as for instance "A Night at Dago Tom's," not ending it with a dramatic dénouement as Kipling did, but giving us a simple narrative of the crude, coarse pleasure that the sailor on leave indulges in. "One of the Bo'sun's Yarns" touches the superstitious beliefs usually associated with a seaman.

His poem *Dauber* is his great narrative poem—with the sea playing an important part. The seamen are, as Masefield always sees them, hard, rough, and brutal in their treatment of the sensitive yet courageous Dauber. Of the sea itself he describes both the calm and the tempest. From *Dauber* we have this picture of quiet:

Out of the air a line of quiet came,
All fell upon the heaven like a drouth;
The brass sky watched the brassy water flame.
Drowsed as a snail the clipper loitered south
Slowly, with no white bone across her mouth.

The masterly portion is the storm effect he gains by the use of clashing consonants. It is a real Cape Horn storm. One is plunged into the fury of the gale and feels himself part of the frenzy on deck.

. . . . . Then the snow
Whirled all about, dense, multitudinous, cold—
Mixed with the wind's one devilish thrust and shriek,
Which whiffled out men's tears, deafened, took hold,
Flattening the flying drift against the cheek.
The yards buckled and bent, man could not speak.
The ship lay on her broadside; the wind's sound
Had devilish malice at having got her downed.

. . . . . .

Then in a rush he swirled, over she went;
Her lee-rail dipped, he struck, and something gave;
His legs went through a port as the roll spent;
He paused, then rolled, back the water drave,
He drifted with it as a part of a wave;
Drowning, half stunned, exhausted—partly frozen,
He struck the booby hatchway; then the Bo'sun leaped.

. . . . . .

Any stanza quoted from this portion of the poem, is realistic. It is true also that the sailors after the Dauber's death revealed under their rough exterior some of the human qualities that everyone knows ought to be there. They seem, in their fatalistic attitude toward life, more like flesh and blood heroes than those imagined by either of the first two sea poets mentioned. Masefield writes of the sea in terms of the present, of the actual, with faithful regard for detail. And at the same time he writes poetry.

—Lloyd B. Gale

EXERCISES

I. State clearly your criticism on one subject suggested by the following groups of subjects. Remember that criticism that is not substantiated by facts is worthless.

1. Machines

Fords	The Hoover Vacuum Sweeper
The Victrola	The Hammond Typewriter
Pocket Cigar Lighter	Automatic Fire Extinguishers
Draeger Mine Helmets	Automatic Speed Control for Locomotives

2. Systems

Freshman Customs	Honor System in College
Capital Punishment	The Use of Alienists in Trials
Primary Election System	Federal Ownership of Railroads
The Unicameral System of City Government	The Responsible Government System

3. Men

Robert E. Lee, General	Florence Nightingale
Li Hung Chang, Diplomat	Jacob Riis, Self-made Man
Charles Schwab as a Leader	Rockefeller as a Philanthropist
Edward Bok as Magazine Editor	Charles George Gordon, Military Leader
Woodrow Wilson as a Peace Commissioner	Theodore Roosevelt, a Typical American

4. Books

Any book that you have read or that you are reading may be criticized with respect to its capacity for holding

the interest, the inherent interest of its subject matter, its style, its diction, its value as a literary or scientific contribution. Criticisms of this sort should contain about five hundred words.

II. Write a criticism of about four hundred words on one of the following subjects. Write it as though you were living at the time the event occurred or the object was produced.

The Return from Elba
Caruso's First Appearance
The Execution of Charles I
Fulton's Ship the *Clermont*
The Installation of the First Telegraph
The First Locomotive
The First Production of *Hamlet*
The Publication of *The Lyrical Ballads*

CHAPTER IV

Expository Biography

The Nature of Expository Biography. When a writer of a biography is concerned chiefly with the purpose, idea, or determination that guided the life of the subject of his biography and tells how those ideas were persisted in until the person succeeded or failed, he has written an expository biography. In such a biography, facts about parentage, school life, and marriage, together with the usual statement of the dates of birth and death, are omitted, or, if mentioned, are subordinated to the main idea of the article, which is to set forth the principles that actuated the life. The usual chronological facts are considered only when they have some distinct bearing on the purposes of the person about whom the biography is written. To the author of an expository biography, the man's life is not a time-table of his journey from birth to death, nor is it an account of the stop-overs he has been allowed as he has traveled from the cradle to the grave; it is rather an estimate or an evaluation of the worth of his acts and ideas and an interpretation of his controlling motive as that motive shows itself through what he has done. The important items in an expository

biography are always the interpretations that are made of the thoughts, acts, and principles of the subject.

Although an expository biography is, in the main, an interpretation, in some respects it is also a criticism. In many instances it has been definitely called a critical biography. Its purpose is to analyze and weigh each individual event in the life of the subject in order to determine what light that event throws on the person's ideas and principles. If the event has no appreciable effect, it is discarded for that which does. The writer of an expository biography must discard many items that, although interesting in themselves, have no bearing on the ultimate purpose of the expository biography, which is to expound the life work of the subject.

What Expository Biography Presupposes. At all times the expository biography requires an enormous amount of investigation. It always presupposes a very complete knowledge of the subject. It can never be slipshod or cursory. It should—when well done—be the last word on the subject. It should give a picture of the whole man, of his point of view, of his mental characteristics, and of his actions. The lack of this complete information has led to some amazing misconceptions of some of the persons about whom biographies have been written. Lord Byron, for example, will perhaps never be fully known to us, although many biographies have been written about him. Those who knew him best

destroyed what they had written or refrained from putting on paper any of the facts that would explain him adequately. Robert Louis Stevenson, although many have essayed to give an account of his life, has not been satisfactorily treated in a critical or expository biography. Robert Burns, in writing of a totally different matter, expressed the idea that is the groundwork of the expository biography:

> Who knows the heart, 'tis he alone,
> Decidedly can try us.

In those two verses lies the difficulty that confronts the biographers of both Byron and Stevenson. It is decidedly the difficulty that confronts the biographer of Mary Queen of Scots. Some of the items that would give us clues to the real personality that was in

> The queen from over the water,
> The witch from over the foam,

will never be known. Conjecture there is a plenty, but the facts that might throw light upon her heart and upon her intentions lack either confirmation or authenticity. Of her it is probable that no expository biography that will satisfy will ever be written.

Expository Biography Demands Sympathetic Understanding. At best, an expository biography can be nothing more than an interpretation of some one's life and work. It is most satisfactory when there exists between the writer and his subject a sympathy born of a complete understanding of the

heredity and environment of his subject. It is best when the writer knows at first hand the difficulties his subject labored under and the obstacles he surmounted. Principal Shairp could only rail at Robert Burns, but Thomas Carlyle, whose rearing had been similar to that of Burns, understood him and could interpret him. Read the two essays on Robert Burns by these two distinguished critics and what is meant by sympathetic understanding will be immediately evident. Carlyle's condemnation of some of the characteristics of Burns's nature is no less strong than is that of Shairp, but it is based on a better comprehension of the man Burns and his environment. The sympathy that characterizes Carlyle's attitude cannot be construed as sentimentality; it is honest and straightforward. His criticism is based on definite principles and worked out according to a well-conceived plan. His method of approach may serve as a form upon which to base the ordinary expository biography.

Nevertheless, we are far from thinking that the problem of Burns's Biography has yet been adequately solved. We do not allude so much to the deficiency of the facts or documents—though of these we are still every day receiving some fresh accession—as to the limited and imperfect application of them to the great end of Biography. Our notions upon this subject may appear extravagant; but if an individual is really of consequence enough to have his life and character recorded for public remembrance, we have always been of the opinion that the public ought to be made acquainted with all the inward springs and

relations of his character. How did the world and man's life, from his particular position, represent themselves to his mind? How did coexisting circumstances modify him from without; how did he modify these from within? With what endeavors and what efficacy rule over them; with what resistance and what suffering sink under them? In one word, what and how produced was the effect of society on him; what and how produced was his effect on society? He who would answer these questions, in regard to any individual, would, as we believe, furnish a model of perfection in Biography.

—Thomas Carlyle: *Essay on Burns*

Expository Biography Requires Fairness. There is no intention in what has just been said to suggest that an expository biography is a matter of partisanship or prejudice. It must be fully as just as criticism should be, for in a real sense it is criticism. It presupposes the same degree of care in evaluating the facts. It demands the same care in the massing of facts. It asks however that, in addition to fairness, kindliness and sympathy and understanding shall prevail in all the work. It demands that anything which may make for carping, unjudicial criticism, and disparagement be removed in advance.

To sum up the ideas that have been suggested, the writer of the expository biography must endeavor to discover the central idea that actuated the life of the subject. He must find out how that idea came into existence, why it existed, and toward what it led. With these facts before him, he should endeavor to ascertain how well the person about whom he

writes has succeeded in doing what he set out to do. The result will be an expository biography.

The following lecture on Botticelli is an adequate example of expository methods applied to biography.

ALESSANDRO BOTTICELLI *

Botticelli was a painter who gained great fame during his lifetime but, as the ideals of the early Renaissance disappeared and the artistic sense of Italy and Europe declined or took other directions, his work sank into complete neglect. In the early part of the seventeenth century the Grand Duke Ferdinand I of Tuscany issued a decree giving a list of artists whose works were forbidden to be removed from Florence, but Botticelli's name is not included, though the list enumerates many minor artists whose work no one cares for now.

The modern appreciation of early Italian art began in England in the early nineteenth century and it was greatly stimulated there by the rise of the so-called pre-Raphaelite Brotherhood in 1847. This whole movement was an outcome of the Oxford revival, which led so many Englishmen to a closer sympathy with the Roman Catholic Church. A group of artists, of whom the leader was Dante Gabriel Rossetti, became imbued with enthusiasm for early Italian art and drew their inspiration from it. In 1849 Rossetti wrote to his brother from Paris that the Madonna and Child by Botticelli was one of the finest pictures in the Louvre. This seems to be about the earliest modern appreciation of the artist. For in 1847 Ruskin wrote to the trustees of the National Gallery, urging them to purchase

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some representative works of the early Italian masters, but he does not mention Botticelli and confesses in his autobiography, written in his old age, that Lippi and Botticelli were at that time still far beyond him. In 1867 Rossetti bought the "Emeralda Bandinelli," now in the Wallace Collection and generally admitted to be an excellent production of Botticelli's school rather than by the hand of the master. Inspired by a photograph of "Spring," the original of which he never saw, Rossetti wrote the sonnet, "For Spring," in 1880. Meanwhile, Walter Pater had published his famous essay entitled "A Fragment on Botticelli," still considered the most suggestive and subtle appreciation of the master. Toward the close he asks the question, "Is a painter like Botticelli, a secondary painter, a subject for general criticism?" thus serving to remind us how much we owe to this very essay in our modern estimates of the unique position of Botticelli among the great masters of the Renaissance.

Ruskin's first public mention of our artist occurs in *Ariadne Florentina* of 1873, and this was followed two years later by *Mornings in Florence*, where he again returns to Botticelli. These books were widely read and quite without the author's intention contributed largely to the peculiarly English cult of Botticelli which became one phase of the "Aesthetic Movement" of 1880, with which the name of Oscar Wilde first came into prominence. By that time the name of Botticelli had become so well known that Du Maurier could publish his famous joke in *Punch*, where a young man of fashion on announcing that he preferred Chianti to Botticelli is reproved and told that Botticelli isn't a wine but a cheese. Today every cultivated person accepts Botticelli as a great master, though it may be doubted whether his real qualities are even yet revealed to a very great number of people.

The painter's life offers very little that is picturesque or

interesting in its outer history. His father was a man in comfortable circumstances, a tanner named Filipepi. As the word Botticelli calls up for us visions of tall, slender, willowy figures in light, floating garments, it is somewhat disconcerting to be told by modern investigators that Vasari's story that he took the name from his first master, a goldsmith named Botticelli, is hypothetical; that Botticelli, which means "a little tub," was a nickname first given to the painter's older brother on account of his tub-like proportions. This brother was a broker and the mainstay of the family. From him the painter inherited the name which he was to make so famous.

About 1460 he became an apprentice of Fra Filippo Lippi, at that time engaged on the well-known frescoes in the choir of the duomo at Prato. Lippi, whose influence was most favorable to the development of much that was characteristic in the genius of Botticelli, was the last of the older generation of devotional painters. Although he introduced many innovations into his treatment of religious subjects, humanizing types and sentiment, yet in the main he belonged to the Idealistic as opposed to the Naturalistic school and was almost untouched by the prevailing passion for scientific research. Under him Sandro [Alessandro] was, no doubt, confirmed in the idealistic bend of his own nature and so was enabled to resist the naturalistic influences by which he was later surrounded.

There is, however, very little evidence of the direct influence of the master over the pupil. Like Lippi, Botticelli gave preponderance to the emotional over the physical aspects of human energy, but the grandeur and breadth and simplicity of the Prato frescoes are qualities conspicuously lacking in Botticelli. Lippi was direct, natural, and concrete; Botticelli was abstract, visionary, and elaborate. His art, in both its perfections and imperfections, shows

that he was one of the strongest and most independent personalities of the early Renaissance.

After his apprenticeship to Fra Filippo he came under the influence of several strong painters, but his own personality was so powerful that no one influence became permanent. Although he absorbed much, he was by nature a leader and not a follower, the founder of a school and the inventor of a style rather than the continuator or developer of any existing style.

We know that Lippi left Tuscany for Spoleto in 1468 and that Botticelli did not accompany him, and there is reason to suppose that he then became an assistant of Antonio Pollaiuolo, for we recognize Botticelli as the author of our picture "Fortitude" in a set of panels illustrating the Virtues, the commission for which was given to Pollaiuolo, who executed the remainder. There are marked indications of Pollaiuolo's influence in all of Botticelli's early works. This influence was of great advantage to him, as he needed, for the completion of his education, to devote himself to the nude and to anatomical and technical studies in which Pollaiuolo was specially strong.

It was partly by means of this scientific knowledge that he was able to accomplish those versions of the body in movement which are among his greatest achievements. The atmosphere of uncompromising naturalism of Pollaiuolo supplied much that was wanting in the influence of Fra Filippo and, by modifying that, prepared the way for the development of his own individuality.

In 1472 Botticelli was commissioned to take charge of Fra Filippo's young son, Filippino, who was then fourteen years of age. Under Sandro's tutelage Filippino Lippi developed into one of the most charming and distinguished painters of the last quarter of the fifteenth century. His early style so much resembles that of his

master that Filippino's works of that period are not infrequently attributed to Botticelli.

Botticelli's first important commission was the St. Sebastian now in the Berlin Gallery. The next few years, up to 1480, were passed largely in the service of the Medici family and during this time Botticelli was evidently brought into close contact with the ruler of Florence and the illustrious group by which he was surrounded. Outside of his genius for statecraft, Lorenzo was gifted with a fine taste for letters and the fine arts. He took a scholarly interest in ancient philosophies and had a poetic gift amounting almost to genius. Gay and lavish, he entertained his friends with banquets modeled on those of ancient Rome and took part in gorgeous masques and pageants for the diversion of the people. His court was a center of learning and culture, which attracted the most brilliant poets, artists, and thinkers.

The classic revival was then at its height. It dominated all the habits of thought and penetrated into the life of the period, bringing an element of splendor and refinement and also of affectation into the taste and manners of the cultivated classes. The antique became a fashion as well as a high ideal. Poetry, literature, and painting were overlaid with classic imagery and illusions, strangely blended with much that was still medieval. These were the influences under which Botticelli lived and worked and these influences permeated his art. Gifted with a keenly analytical and responsive mind, he, more than any other artist of the period, entered into the spirit of early Renaissance culture and his art became a mirror reflecting all the tendencies of the age.

In 1480 Botticelli's fame was at its height and he was summoned to Rome by Pope Sixtus IV to collaborate with the most distinguished artists of the day in decorating with frescoes the walls of the newly constructed Sistine

Chapel. Botticelli seems to have had the general direction of the entire work, but his own contribution consists of three frescoes. Vasari tells us that he gained great renown and much money in Rome and, after squandering the money, returned to Florence, where he wasted much time in studying and commentating the *Divine Comedy* of Dante. How true this may be we do not know. He certainly spent some time at a later period in making line drawings to illustrate the *Divine Comedy*, and between 1480 and 1490 some of his greatest masterpieces and most important commissions were executed. Botticelli's artistic life was ended early in the nineties, when he became a devoted adherent of Savonarola, who made his first great success as a preacher in 1489. For eight years Savonarola ruled the conscience of Florence and Botticelli adopted his rule so rigidly that he gave up painting entirely and Vasari says he would have died from starvation but for the support given him by Lorenzo and other generous friends. The latter statement is probably not exact, but we may assume that he gave up most of his personal work then, though he evidently retained supervision over his workshops from which issued a great number of Botticellesque works, which are no longer distinguished by the fine artistic feeling of the master and in which the emotional quality has become strained and overwrought.

In 1500 Sandro's genius asserts itself for the last time in a beautiful little picture of "Nativity" in the National Gallery, London, apparently the only work the artist signed and dated. From 1500 until his death in 1510 we find no notice of importance.

According to his biographers he was a man of pleasing personality, with a fondness for practical jokes. When Vasari wrote, he was still remembered as a reckless, head-

strong personality, with eccentric habits and tastes and a confirmed horror of matrimony.

In considering Botticelli's art it is important to bear in mind that he was a man who was singularly modern in the complexity of his temperament and gifted with a keen intellect, a poetic and visionary mind, a profound imagination. In the works of certain periods of his life the quality of intense idealism has attracted one group of critics who look at his work entirely from the literary standpoint and see in it only the poetry and the deep thoughtfulness. But there are other periods of his career when his purely artistic gifts overpower the poet and thinker and all his creative energies are brought to bear on the pictorial elements, producing an art that is more independent of representative or expressive intention than anything which had been seen in Italy before him, or than most works produced in Europe since his day. This phase of Botticelli's art has also its exclusive admirers, who neglect the interest his pictures have for us as expressions of early Renaissance thought and feeling.

It is Botticelli's greatest distinction that he is the first painter who valued painting for its abstract decorative qualities rather than for what he could represent with it. The painter works with line, light and shade, color and form, and, broadly speaking, he can use these elements for three distinct purposes: (1) for the expression of ideas or sentiments; (2) for the imitative representation of actual objects; (3) for their intrinsic decorative value only; that is, for the beauty that exists in line, light and shade, or color, apart from anything that they may express or represent.

Naturally, in the best art, these three aims are never wholly separated, but the predominance of one or another gives a definite character to particular periods and schools of art.

In its early development, Italian painting was merely an instrument in the hands of the church. Continuing the work begun by the mosaics on early Christian basilicas, painting supplied the church with a set of visual symbols which stood for religious ideas. Its subject matter was exclusively religious and ideal and as artists were hampered with technical shortcomings after the decline of Roman civilization; and, as the church was satisfied with an easily understood symbol, painting consisted for a long time of a series of conventions, as no fresh observation was demanded of artists. It was the painters themselves who, as they exercised their art, worked gradually, for their own satisfaction, to make their imagery more lifelike and more real. While still treating exclusively sacred themes, they sought to emphasize the human rather than the divine. Sentiments within the ordinary range of human experience were gradually introduced with increasing intimacy until we find Fra Filippo, in the middle of the fifteen century, devoting himself particularly to the expression of human sorrow and joy and the happiness of human childhood. While remaining ideal and imaginative in character, art abandoned symbolism for expression and the expression is of earthly sentiments rather than the heavenly ones. Side by side with this, there was rising in the first half of the fifteenth century another school, which substituted observation for imagination, which was occupied with purely physical rather than spiritual effects. To represent the real appearance of objects, regardless of their spiritual meaning, was aim enough for them. So we have first, the expression of religious contemplation giving way to the expression of human observation of material forms. With the naturalists the external world obscured the world of ideals within and poetry made way for science.

In the midst of this naturalism Botticelli took a different attitude. For him the imitative and representative powers

of art were not an aim in themselves. The expressive powers he does make his goal at certain periods of his career, when he was dominated by humanistic culture in his mature life and when religious fervor took possession of him in his old age. But when Botticelli is in his most inspired moments he is preoccupied with painting solely as a form of decoration.

Painting is valuable to him then not for any moral or spiritual significance which it can convey, but for the purely aesthetic effect—for its abstract beauty. And out of the constituent elements of painting, line, light and shade, and color, Botticelli selects line as being the most abstract, as possessing the least representative value, and he becomes a consummate master of line, the first great decorative painter of Italy and the father of the aesthetic schools as distinguished from the devotional or scientific schools of art.

As his art progressed, he became more and more ready to sacrifice all story-telling elements to the expression of movement by means of line. Take, for example, the "Allegory of Spring" or the "Birth of Venus." Some of Botticelli's literary critics have been puzzled as to the artist's meaning and have attempted to explain these pictures as illustrations to poems by Lorenzo or Poliziano, and they try to read into them hidden allegorical meanings.

But they miss the obvious in seeking for the abstruse. It is pretty evident that Botticelli meant primarily to produce a piece of fine lineal decoration and that he was indifferent to the subject matter except so far as it lent itself to the decorative development of his picture.

Botticelli was closely in touch with the great humanist poets and his pictures reflect the ornate imagery of this new school which was rising in Italy. It was very decorative poetry, a poetry of form rather than of sentiment, the charm of which lies in the style rather than in the

meaning. There is certainly a great general resemblance between much of this verse and Botticelli's masterpieces.

Although none of his pictures can be identified with any particular poem, there is no doubt that many of his motives were suggested by poetic images. In transferring the image from poetry to painting, however, Botticelli develops it with reference to its pictorial possibilities instead of carrying its verbal meaning out literally.

For the sake of clearness I have said that Botticelli is preoccupied with two different phases of art in different periods: expression and decoration. But there is no hard and fast line, for in the "Madonna of the Magnificat" the religious sentiment exists, though dominated by the feeling for beauty of line; and, on the other hand, in the "Birth of Venus," a most decorative work, a vein of deeper meaning steals in by means of the sad, strangely spiritualized Madonna type which he has bestowed upon the face of Venus. It is so that Botticelli shows himself the chief exponent of what Symonds has termed the double-mind of the Renaissance, which was divided between the conflicting ideals of Christianity and of Hellenism; many of the most brilliant scholars spending their lives trying to reconcile the religion and philosophy of Greece with that of Christianity. In this attitude of mind Botticelli conceived many of his pictures, but he reflects the spirit of the age and is always irresolute. On the one hand the religion of beauty, of natural happiness and of free expansion attracts him, while on the other he seems to struggle to eliminate everything which does not contribute to the idea of asceticism and renunciation.

Botticelli never attains any true conception of the antique. The serenity and blitheness of the Greek spirit were beyond him, and his gods and goddesses are always troubled and wistful. Yet it is only in one or two of his latest pictures that he achieves the full expression of

Christian faith and fervor. There is so much distress in his conceptions, his Madonnas are so plaintive, his angels so pitying, that he appears to portray the Christian characters as burdened rather than exalted by their beliefs. In all of his more thoughtful work figures are felt to be the personification of ideas, moods, or emotions rather than individualized conceptions of real persons. Whatever the ostensible subject is, he rarely tries to represent it, but uses it merely as a means of expressing some peculiar mood of his own.

Botticelli has been accused of a lack of virility, and there may be some truth in the accusation. Every artist has his own ideal, and Botticelli's ideal of grace is excessive slenderness, and alertness is more to him than strength. His art is nervous, swift, and delicate; never majestic or grand. In action his figures are often too vehement, especially in his later work, and in repose they are sometimes too languorous. In dainty grace and inimitable charm his conceptions are always elaborate and complex, almost never simple. He is often inaccurate in drawing and careless about proportions. Figures are often too slim, hands and feet too large, and heads abnormally small are set on slender stem-like necks.

As a painter of light, swift movement, Botticelli has rarely been equaled. This was the great problem which engrossed the Naturalists, like Pollaiuolo; but with Botticelli the representation of movement seems to be more a matter of artistic perception than of scientific study; and while the naturalists make movement an occasion for the display of anatomical knowledge often unlovely in effect, Botticelli values movement as the supreme manifestation of living grace, and therefore avoids all action which requires great bodily exertion.

He was curiously oblivious of the chief tendencies of painting in his later life, tendencies which produced the

great art of the sixteenth century. His own latest works seem to have so completely exhausted the resources of his manner, which was delineation by line, that without the discoveries of Michelangelo and of Leonardo, no further development seems possible for the art of painting. Michelangelo discovered the possibilities for psychological expression inherent in the nude, and gave a new direction to pictorial art. The nude studies of Pollaiuolo and of the naturalists were mere drawing based on anatomy. Leonardo's innovations are more original and far-reaching than those of Michelangelo. In the works of Leonardo's predecessors light and shade was considered as pertaining to each object separately. In Leonardo's own work objects are considered as bathed in a homogeneous play of light and shade into which outlines as such melt and are softened. He first discovered that objects are not bounded by hard, definite outlines, but that all nature is made up of patches of color and light and dark, whose edges tend to fuse and dissolve into each other instead of stopping at a boundary line. Botticelli was only interested in light and shade as a means of expressing relief. He never loses contours or fuses masses. As the art of the succeeding century was largely devoted to the development of chiaroscuro as a means of emotional expression, the complete indifference of Botticelli to effects of light and shade probably explains why his works were so completely forgotten within a century after his death.

—Herbert E. Everett: *University of Pennsylvania Lectures*

EXERCISE

The world has produced many men and women whose lives have exemplified some set group of principles, ideals, or purposes. Each one of these persons has been influenced throughout his stay on

earth by a desire to accomplish some particular thing. In working up the material for an expository biography of such a person, the student should endeavor first of all to ascertain what that controlling purpose was and then to select those facts and events that are recorded about the individual he has selected that show how the purpose was put into action. The following list of names is meant to be suggestive rather than exhaustive. Each student can probably add many other names to the list.

It is suggested that, before any exercise in the preparation of an expository biography is assigned, the instructor should endeavor to have the class add considerably to the appended list.

Jane Addams
Jacob Riis
Joan of Arc
Peter Cooper
Leon Trotsky
Louis Pasteur
Francis Xavier
Francis Parkman
Andrew Carnegie
John L. Macadam
Hernando Cortez
Marshal Foch
Robert E. Peary
Prince Bismarck
George Stephenson
George W. Goethals
Nikolai Lenine
John Ericsson
Stephen Girard
David Belasco
Saint Augustine
George Westinghouse
Richelieu
Henry Ford
Luther Burbank
Count di Cavour
Georges Clemenceau
Theodore Roosevelt
Sir Isaac Newton
David Livingstone
Christopher Columbus
Alfred Bernhard Nobel
Alice Freeman Palmer
Edwin Henry Landseer

The Character Sketch

Ordinarily what is commonly called the character sketch is included under descriptive writing. In so far, however, as the character sketch is an attempt to explain the person under observation, it is exposition. In some measure it is akin to the expository biography in that it endeavors to interpret the person whose portrait is being presented. The method generally pursued is to set forth how the person looks, acts, and talks, and from this description to state explicitly or suggest his character. It is an exposition in brief of his beliefs, his modes of life, his whole nature.

The character sketch differs from the usual expository description in that it is individual rather than typical except as the actions and moods represented are typical of the individual. Its purpose is to analyze the person under observation in order that generalizations may be made about him.

The selections which follow illustrate various characteristics of the character sketch.

DR. JOHNSON

As for Johnson, I have always considered him to be, by nature, one of our great English souls. A strong and noble man; so much left undeveloped in him to the last; in a kindlier element what might he not have been, Poet, Priest, sovereign Ruler! On the whole, a man must not complain of his "element," of his "time," or the like; it is

thriftless work doing so. His time is bad: well then, he is there to make it better! Johnson's youth was poor, isolated, hopeless, very miserable. Indeed, it does not seem possible that, in any the favorablest outward circumstances, Johnson's life could have been ôther than a painful one. The world might have had more of profitable *work* out of him, or less; but his *effort* against the world's work could never have been a light one. Nature, in return for his nobleness, had said to him, Live in an element of diseased sorrow. Nay, perhaps the sorrow and the nobleness were intimately and even inseparably connected with each other. At all events, poor Johnson had to go about girt with continual hypochondria, physical and spiritual pain. Like a Hercules with the burning Nessus'-shirt on him, which shoots in on him dull incurable misery: the Nessus'-shirt not to be stript off, which is his own natural skin! In this manner *he* had to live. Figure him there with his scrofulous diseases, with his great greedy heart, and unspeakable chaos of thoughts; stalking mournful as a stranger in this Earth; eagerly devouring what spiritual thing he could come at: school-languages and other merely grammatical stuff, if there were nothing better! The largest soul that was in all England; and provision made for it of "fourpence-halfpenny a day." Yet a giant invincible soul; a true man's. One remembers always that story of the shoes at Oxford: the rough, seamy-faced, raw-boned College Servitor stalking about, in winter season, with his shoes worn-out; how the charitable Gentleman Commoner secretly places a new pair at his door; and the raw-boned Servitor, lifting them, looking at them near, with his dim eyes, with what thoughts—pitches them out of window! Wet feet, mud, frost, hunger or what you will; but not beggary: we cannot stand beggary! Rude stub-born self-help here; a whole world of squalor, rudeness, confused misery and want, yet of nobleness and manful-

ness withal. It is a type of the man's life, this pitching-away of the shoes. An original man—not a secondhand, borrowing or begging man. Let us stand on our own basis, at any rate! On such shoes as we ourselves can get. On frost and mud, if you will, but honestly on that—on the reality and substance which Nature gives *us*, not on the semblance, on the thing she has given another than us!

And yet with all this rugged pride of manhood and self-help, was there ever soul more tenderly affectionate, loyally submissive to what was really higher than he? Great souls are always loyally submissive, reverent to what is over them; only small mean souls are otherwise. I could not find a better proof of what I said the other day, that the sincere man was by nature the obedient man; that only in a World of Heroes was there loyal Obedience to the Heroic. The essence of *originality* is not that it be *new:* Johnson believed altogether in the old; he found the old opinions credible for him, fit for him; and in a right heroic manner lived under them. He is well worth study in regard to that. For we are to say that Johnson was far other than a mere man of words and formulas; he was a man of truths and facts. He stood by the old formulas; the happier was it for him that he could so stand: but in all formulas that *he* could stand by, there needed to be a most genuine substance. Very curious how, in that poor Paper-age, so barren, artificial, thick-quilted with Pedantries, Hearsays, the great Fact of this Universe glared in, forever wonderful, indubitable, unspeakable, divine-infernal, upon this man too! How he harmonized his formulas with it, how he managed at all under such circumstances: that is a thing worth seeing. A thing "to be looked at with reverence, with pity, with awe." That Church of St. Clement Danes, where Johnson still *worshiped* in the era of Voltaire, is to me a venerable place.

It was in virtue of his *sincerity*, of his speaking still in some sort from the heart of Nature, though in the current artificial dialect, that Johnson was a Prophet. Are not all dialects "artificial"? Artificial things are not all false —nay every true Product of Nature will infallibly *shape* itself; we may say all artificial things are, at the starting of them, *true*. What we call "formulas" are not in their origin bad; they are indispensably good. Formula is *method*, habitude; found wherever man is found. Formulas fashion themselves as Paths do, as beaten Highways, leading toward some sacred or high object, whither many men are bent. Consider it. One man, full of heartfelt earnest impulse, finds out a way of doing somewhat—were it of uttering his soul's reverence for the Highest, were it but of fitly saluting his fellow man. An inventor was needed to do that, a *poet;* he has articulated the dim-struggling thought that dwelt in his own and many hearts. This is his way of doing that; these are his footsteps, the beginning of a "Path." And now see: the second man travels naturally in the footsteps of his foregoer, it is the *easiest* method. In the footsteps of his foregoer; yet with improvements, with changes where such seem good; at all events with enlargements, the Path ever *widening* itself as more travel it;—till at last there is a broad Highway whereon the whole world may travel and drive. While there remains a City or Shrine, or any Reality to drive to, at the farther end, the Highway shall be right welcome! When the City is gone, we will forsake the Highway. In this manner all Institutions, Practices, Regulated Things in the world have come into existence, and gone out of existence. Formulas all begin by being *full* of substance; you may call them the *skin*, the articulation into shape, into limbs and skin, of a substance that is already there: *they* had not been there otherwise. Idols, as we said, are not idolatrous till they become doubtful, empty for the

worshiper's heart. Much as we talk against formulas, I hope no one of us is ignorant withal of the high significance of *true* formulas; that they were, and will ever be, the indispensablest furniture of our habitation in this world.

Mark, too, how little Johnson boasts of his "sincerity." He has no suspicion of his being particularly sincere—of his being particularly anything! A hard-struggling, weary-hearted man, or "scholar" as he calls himself, trying hard to get some honest livelihood in the world, not to starve, but to live—without stealing! A noble unconsciousness is in him. He does not "engrave *Truth* on his watch-seal"; no, but he stands by truth, speaks by it, works and lives by it. Thus it ever is. Think of it once more. The man whom Nature has appointed to do great things is, first of all, furnished with that openness to Nature which renders him incapable of being *in*sincere! To his large, open, deep-feeling heart Nature is a Fact: all hearsay is hearsay; the unspeakable greatness of this Mystery of Life, let him acknowledge it or not, nay even though he seem to forget it or deny it, is ever present to *him*—fearful and wonderful —on this hand and on that. He has a basis of sincerity; unrecognized, because never questioned or capable of question. Mirabeau, Mahomet, Cromwell, Napoleon: all the Great Men I ever heard of have this as the primary material of them. Innumerable commonplace men are debating, are talking everywhere their commonplace doctrines, which they have learned by logic, by rote, at second hand: to that kind of man all this is still nothing. He must have truth; truth which *he* feels to be true. How shall he stand otherwise? His whole soul, at all moments, in all ways, tells him that there is no standing. He is under the noble necessity of being true. Johnson's way of thinking about this world is not mine, any more than Mahomet's was: but I recognize the everlasting element of heart-*sincerity* in both; and see with pleasure how neither of

them remains ineffectual. Neither of them is as *chaff* sown; in both of them is something which the seed-field will *grow*.

Johnson was a Prophet to his people; preached a Gospel to them, as all like him always do. The highest Gospel he preached we may describe as a kind of Moral Prudence: "in a world where much is to be done, and little is to be known, see how you will *do* it!" A thing well worth preaching. "A world where much is to be done, and little is to be known:" do not sink yourselves in boundless bottomless abysses of Doubt, of wretched God-forgetting Unbelief; you were miserable then, powerless, mad: how could you *do* or work at all? Such Gospel Johnson preached and taught—coupled, theoretically and practically, with this other great Gospel, "Clear your mind of Cant!" Have no trade with Cant: stand on the cold mud in the frosty weather, but let it be in your own *real* torn shoes: "That will be better for you," as Mahomet says! I call this, I call these two things *joined together*, a great Gospel, the greatest perhaps that was possible at that time.

Johnson's Writings, which once had such currency and celebrity, are now, as it were, disowned by the young generation. It is not wonderful; Johnson's opinions are fast becoming obsolete: but his style of thinking and of living, we may hope, will never become obsolete. I find in Johnson's Books the indisputablest traces of a great intellect and a great heart—ever welcome, under what obstructions and perversions soever. They are *sincere* words, those of his; he means things by them. A wondrous buckram style—the best he could get to then; a measured grandiloquence, stepping or rather stalking along in a very solemn way, grown obsolete now; sometimes a tumid *size* of phraseology not in proportion to the contents of it: all this you will put up with. For the phraseology, tumid or

not, has always something *within it.* So many beautiful styles and books, with *nothing* in them—a man is a *male*-factor to the world who writes such! *They* are the avoidable kind! Had Johnson left nothing but his *Dictionary*, one might have traced there a great intellect, a genuine man. Looking to its clearness of definition, its general solidity, honesty, insight and successful method, it may be called the best of all Dictionaries. There is in it a kind of architectural nobleness; it stands there like a great solid square-built edifice, finished, symmetrically complete: you judge that a true Builder did it.

One word, in spite of our haste, must be granted to poor Bozzy. He passes for a mean, inflated, gluttonous creature; and was so in many senses. Yet the fact of his reverence for Johnson will ever remain noteworthy. The foolishly conceited Scotch Laird, the most conceited man of his time, approaching in such awe-struck attitude the great dusty irascible Pedagogue in his mean garret there: it is a genuine reverence for Excellence; a *worship* for Heroes, at a time when neither Heroes nor worship were surmised to exist. Heroes, it would seem, exist always, and a certain worship of them! We will also take the liberty to deny altogether that of the witty Frenchman, that no man is a Hero to his *valet-de-chambre.* Or if so, it is not the Hero's blame, but the Valet's: that his soul, namely, is a mean *valet*-soul! He expects his Hero to advance in royal stage-trappings, with measured step, trains borne behind him, trumpets sounding before him. It should stand rather, no man can be a *Grand Monarque* to his *valet-de-chambre.* Strip your Louis Quatorze of his king-gear, and there *is* left nothing but a poor forked radish with a head fantastically carved—admirable to no valet. The Valet does not know a Hero when he sees him! Alas, no: it requires a kind of *Hero* to do that; and one of the world's wants, in *this* as in other senses, is for most part want of such.

On the whole, shall we not say, that Boswell's admiration was well bestowed; that he could have found no soul in all England so worthy of bending down before? Shall we not say, of this great mournful Johnson too, that he guided his difficult, confused existence wisely; led it *well*, like a right-valiant man? That waste chaos of Authorship by trade; that waste chaos of Scepticism in religion and politics, in life-theory and life-practice; in his poverty, in his dust and dimness, with the sick body and the rusty coat: he made it do for him, like a brave man. Not wholly without a lodestar in the Eternal; he had still a lodestar, as the brave all need to have: with his eye set on that, he would change his course for nothing in these confused vortices of the lower sea of Time. "To the Spirit of Lies," bearing death and hunger, "he would in no wise strike his flag." Brave old Samuel: *ultimus Romanorum!*

—Thomas Carlyle: *Heroes and Hero-Worship*

The following selection is an example of analysis applied to character delineation:

THEODORE ROOSEVELT

Theodore Roosevelt always believed that character was of greater worth and moment than anything else. He possessed abilities of the first order, which he was disposed to underrate, because he set so much greater store upon the moral qualities which we bring together under the single word "character."

Let me speak first of his abilities. He had a powerful, well-trained, ever-active mind. He thought clearly, independently, and with originality and imagination. These priceless gifts were sustained by an extraordinary power of acquisition, joined to a greater quickness of apprehension, a greater swiftness in seizing upon the essence of a ques-

tion, than I have ever happened to see in any other man. His reading began with natural history, then went to general history, and thence to the whole field of literature. He had a capacity for concentration which enabled him to read with remarkable rapidity anything which he took up, if only for a moment, and which separated him for the time being from everything going on about him. The subjects upon which he was well and widely informed would, if enumerated, fill a large space, and to this power of acquisition was united not only a tenacious but an extraordinarily accurate memory. It was never safe to contest with him on any question of fact or figures, whether they related to the ancient Assyrians or to the present-day conditions of the tribes of central Africa, to the Syracusan Expedition, as told by Thucydides, or to protective coloring in birds and animals. He knew and held details always at command, but he was not mastered by them. He never failed to see the forest on account of the trees or the city on account of the houses.

He made himself a writer, not only of occasional addresses and essays, but of books. He had the trained thoroughness of the historian, as he showed in his history of the War of 1812 and in *The Winning of the West*, and nature had endowed him with that most enviable of gifts, the faculty of narrative and the art of the teller of tales. He knew how to weigh evidence in the historical scales and how to depict character. He learned to write with great ease and fluency. He was always vigorous, always energetic, always clear and forcible in everything he wrote—nobody could ever misunderstand him—and when he allowed himself time and his feelings were deeply engaged he gave to the world many pages of beauty as well as power, not only in thought but in form and style. At the same time he made himself a public speaker, and here again, through a practice probably unequaled in amount,

he became one of the most effective in all our history. In speaking, as in writing, he was always full of force and energy; he drove home his arguments and never was misunderstood. In many of his more carefully prepared addresses are to be found passages of impressive eloquence, touched with imagination and instinct with grace and feeling.

He had a large capacity for administration, clearness of vision, promptness in decision, and a thorough apprehension of what constituted efficient organization. All the vast and varied work which he accomplished could not have been done unless he had had most exceptional natural abilities, but behind them, most important of all, was the driving force of an intense energy and the ever-present belief that a man could do what he willed to do. As he made himself an athlete, a horseman, a good shot, a bold explorer, so he made himself an exceptionally successful writer and speaker. Only a most abnormal energy would have enabled him to enter and conquer in so many fields of intellectual achievement. But something more than energy and determination is needed for the largest success, especially in the world's high places. The first requisite of leadership is ability to lead, and that ability Theodore Roosevelt possessed in full measure. Whether in a game or in the hunting field, in a fight or in politics, he sought the front, where, as Webster once remarked, there is always plenty of room for those who can get there. His instinct was always to say "Come" rather than "Go," and he had the talent of command.

His also was the rare gift of arresting attention sharply and suddenly, a very precious attribute, and one easier to illustrate than to describe. This arresting power is like a common experience, which we have all had on entering a picture gallery, of seeing at once and before all others a single picture among the many on the walls. For a

moment you see nothing else, although you may be surrounded with masterpieces. In that particular picture lurks a strange, capturing, gripping fascination as impalpable as it is unmistakable. Roosevelt had this same arresting, fascinating quality. Whether in the legislature at Albany, the Civil Service Commission at Washington, or the police commission in New York, whether in the Spanish War or on the plains among the cowboys, he was always vivid, at times startling, never to be overlooked. Nor did this power stop here. He not only without effort or intention drew the eager attention of the people to himself, he could also engage and fix their thoughts upon anything which happened to interest him. It might be a man or a book, reformed spelling or some large historical question, his traveling library or the military preparation of the United States, he had but to say, "See how interesting, how important, is this man or this event," and thousands, even millions, of people would reply, "We never thought of this before, but it certainly is one of the most interesting, most absorbing things in the world." He touched a subject and it suddenly began to glow as when the high-power electric current touches the metal and the white light starts forth and dazzles the onlooking eyes. We know the air played by the Pied Piper of Hamelin no better than we know why Theodore Roosevelt thus drew the interest of men after him. We only know they followed wherever his insatiable activity of mind invited them.

Men follow also most readily a leader who is always there before them, clearly visible and just where they expect him. They are especially eager to go forward with a man who never sounds a retreat. Roosevelt was always advancing, always struggling to make things better, to carry some much-needed reform, and help humanity to a larger chance, to a fairer condition, to a happier life. Moreover, he looked always for an ethical question. He

was at his best when he was fighting the battle of right against wrong. He thought soundly and wisely upon questions of expediency or of political economy, but they did not rouse him or bring him the absorbed interest of the eternal conflict between good and evil. Yet he was never impractical, never blinded by counsels of perfection, never seeking to make the better the enemy of the good. He wished to get the best, but he would strive for all that was possible, even if it fell short of the highest at which he aimed. He studied the lessons of history, and did not think the past bad simply because it was the past, or the new good solely because it was new. He sought to try all questions on their intrinsic merits, and that was why he succeeded in advancing, in making government and society better, where others, who would be content with nothing less than an abstract perfection, failed. He would never compromise a principle, but he was eminently tolerant of honest differences of opinion. He never hesitated to give generous credit where credit seemed due, whether to friend or opponent, and in this way he gathered recruits and yet never lost adherents.

The criticism most commonly made upon Theodore Roosevelt was that he was impulsive and impetuous, that he acted without thinking. He would have been the last to claim infallibility. His head did not turn when fame came to him and choruses of admiration sounded in his ears, for he was neither vain nor credulous. He knew that he made mistakes, and never hesitated to admit them to be mistakes, and to correct them or put them behind him when satisfied that they were such. But he wasted no time in mourning, explaining, or vainly regretting them. It is also true that the middle way did not attract him. He was apt to go far, both in praise and censure, although nobody could analyze qualities and balance them justly in judging men better than he. He felt strongly, and as he

had no concealments of any kind, he expressed himself in like manner. But vehemence is not violence, nor is earnestness anger, which a very wise man defined as a brief madness. It was all according to his nature, just as his eager cordiality in meeting men and women, his keen interest in other people's care or joys, was not assumed, as some persons thought who did not know him. It was all profoundly natural, it was all real, and in that way and in no other was he able to meet and greet his fellow men. He spoke out with the most unrestrained frankness at all times and in all companies. Not a day passed in the presidency when he was not guilty of what the trained diplomatist would call indiscretions. But the frankness had its own reward. There never was a President whose confidence was so respected or with whom the barriers of honor which surround private conversation were more scrupulously observed. At the same time, when the public interest required, no man could be more wisely reticent. He was apt, it is true, to act suddenly and decisively, but it was a complete mistake to suppose that he therefore acted without thought or merely on a momentary impulse. When he had made up his mind, he was resolute and unchanging, but he made up his mind only after much reflection, and there never was a President in the White House who consulted not only friends but political opponents and men of all kinds and conditions more than Theodore Roosevelt. When he had reached his conclusion he acted quickly and drove hard at his object, and this it was, probably, which gave an impression that he acted sometimes hastily and thoughtlessly, which was a complete misapprehension of the man. His action was emphatic, but emphasis implies reflection, not thoughtlessness. One cannot even emphasize a word without a process, however slight, of mental differentiation.

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Very many people, powerful elements in the community, regarded him at one time as a dangerous radical, bent upon overthrowing all the safeguards of society and planning to tear out the foundations of an ordered liberty. As a matter of fact, what Theodore Roosevelt was trying to do was to strengthen American society and American government by demonstrating to the American people that he was aiming at a larger economic equality and a more generous industrial opportunity for all men, and that any combination of capital or of business, which threatened the control of the government by the people who made it, was to be curbed and resisted, just as he would have resisted an enemy who tried to take possession of the city of Washington. He had no hostility to a man because he had been successful in business or because he had accumulated a fortune. If the man had been honestly successful and used his fortune wisely and beneficently, he was regarded by Theodore Roosevelt as a good citizen. The vulgar hatred of wealth found no place in his heart. He had but one standard, one test, and that was whether a man, rich or poor, was an honest man, a good citizen, and a good American. He tried men, whether they were men of "big business" or members of a labor union, by their deeds, and in no other way. The tyranny of anarchy and disorder, such as is now desolating Russia, was as hateful to him as any other tyranny, whether it came from an autocratic system like that of Germany or from the misuse of organized capital. Personally he believed in every man earning his own living, and he earned money and was glad to do so; but he had no desire or taste for making money, and he was entirely indifferent to it. The simplest of men in his own habits, the only thing he really would have liked to have done with ample wealth would have been to give freely to the many good objects which continually interested him.

Theodore Roosevelt's power, however, and the main source of all his achievement, was not in the offices which he held, for those offices were to him only opportunities, but in the extraordinary hold which he established and retained over great bodies of men. He had the largest personal following ever attained by any man in our history. I do not mean by this the following which comes from great political office or from party candidacy. There have been many men who have held the highest offices in our history by the votes of their fellow countrymen who have never had anything more than a very small personal following. By personal following is meant here that which supports and sustains and goes with a man simply because he is himself; a following which does not care whether their leader and chief is in office or out of office, which is with him and behind him because they, one and all, believe in him and love him and are ready to stand by him for the sole and simple reason that they have perfect faith that he will lead them where they wish and where they ought to go. This following Theodore Roosevelt had, as I have said, in a larger degree than anyone in our history, and the fact that he had it and what he did with it for the welfare of his fellow men have given him his great place and his lasting fame.

. . . . . .

All men admire courage, and that he possessed in the highest degree. But he had also something larger and rarer than courage, in the ordinary acceptation of the word. When an assassin shot him at Milwaukee he was severely wounded; how severely he could not tell, but it might well have been mortal. He went on to the great meeting awaiting him and there, bleeding, suffering, ignorant of his fate, but still unconquered, made his speech and went from the stage to the hospital. What bore him up was the

dauntless spirit which could rise victorious over pain and darkness and the unknown and meet the duty of the hour as if all were well. A spirit like this awakens in all men more than admiration, it kindles affection and appeals to every generous impulse.

Very different, but equally compelling, was another quality. There is nothing in human beings at once so sane and so sympathetic as a sense of humor. This great gift the good fairies conferred upon Theodore Roosevelt at his birth in unstinted measure. No man ever had a more abundant sense of humor—joyous, irrepressible humor—and it never deserted him. Even at the most serious and even perilous moments if there was a gleam of humor anywhere he saw it and rejoiced and helped himself with it over the rough places and in the dark hour. He loved fun, loved to joke and chaff, and, what is more uncommon, greatly enjoyed being chaffed himself. His ready smile and contagious laugh made countless friends and saved him from many an enmity.

. . . . . .

He was very human and intensely American, and this knit a bond between him and the American people which nothing could ever break. And then he had yet one more attraction, not so impressive, perhaps, as the others, but none the less very important and very captivating. He never by any chance bored the American people. They might laugh at him or laugh with him, they might like what he said or dislike it, they might agree with him or disagree with him, but they were never wearied of him, and he never failed to interest them. He was never heavy, laborious, or dull. If he had made any effort to be always interesting and entertaining he would have failed and been tiresome. He was unfailingly attractive, because he was always perfectly natural and his own unconscious self.

And so all these things combined to give him his hold upon the American people, not only upon their minds, but upon their hearts and their instincts, which nothing could ever weaken and which made him one of the most remarkable, as he was one of the strongest, characters that the history of popular government can show. He was also—and this is very revealing and explanatory, too, of his vast popularity—a man of ideals. He did not expose them daily on the roadside with language fluttering about them like the Tibetan who ties his slip of paper to the prayer wheel whirling in the wind. He kept his ideals to himself until the hour of fulfillment arrived. Some of them were the dreams of boyhood, from which he never departed, and which I have seen him carry out shyly and yet thoroughly and with intense personal satisfaction. He had a touch of the knight-errant in his daily life, although he would never have admitted it; but it was there. It was not visible in the medieval form of shining armor and dazzling tournaments, but in the never-ceasing effort to help the poor and the oppressed, to defend and protect women and children, to right the wronged and succor the down-trodden. Passing by on the other side was not a mode of travel through life ever possible to him; and yet he was as far distant from the professional philanthropist as could well be imagined, for all he tried to do to help his fellow men he regarded as part of the day's work to be done and not talked about. No man ever prized sentiment or hated sentimentality more than he. He preached unceasingly the familiar morals which lie at the bottom of both family and public life. The blood of some ancestral Scotch covenanter or of some Dutch reformed preacher facing the tyranny of Philip of Spain was in his veins, and with his large opportunities and his vast audiences he was always ready to appeal for justice and righteousness. But his own personal ideals he never

attempted to thrust upon the world until the day came when they were to be translated into realities of action.

When the future historian traces Theodore Roosevelt's extraordinary career, he will find these embodied ideals planted like milestones along the road over which he marched. They never left him. His ideal of public service was to be found in his life, and as his life drew to its close he had to meet his ideal of sacrifice face to face. All his sons went from him to the war, and one was killed upon the field of honor. Of all the ideals that lift men up, the hardest to fulfill is the ideal of sacrifice. Theodore Roosevelt met it as he had all others and fulfilled it to the last jot of its terrible demands. His country asked the sacrifice and he gave it with solemn pride and uncomplaining lips.

This is not the place to speak of his private life, but within that sacred circle no man was ever more blessed in the utter devotion of a noble wife and the passionate love of his children. The absolute purity and beauty of his family life tell us why the pride and interest which his fellow countrymen felt in him were always touched with the warm light of love. In the home so dear to him, in his sleep, death came, and—

SO VALIANT-FOR-TRUTH PASSED OVER AND ALL THE TRUMPETS SOUNDED FOR HIM ON THE OTHER SIDE.

—Henry Cabot Lodge: *Senate Documents*

Jane Austen, by a few deft touches, in the next selection, describes the characteristics of the two principal members of the Elliot family.

SIR WALTER ELLIOT AND FAMILY

Sir Walter Elliot, of Kellynch Hall, in Somersetshire, was a man who, for his own amusement, never took up

any book but the Baronetage; there he found occupation for an idle hour and consolation in a distressed one; there his faculties were roused into admiration and respect, by contemplating the limited remnant of the earliest patents; there any unwelcome sensations, arising from domestic affairs, changed naturally into pity and contempt as he turned over the almost endless creations of the last century, and there, if every other leaf were powerless, he could read his own history with an interest which never failed. This was the page at which the favorite volume always opened:

Elliot of Kellynch Hall

Walter Elliot, born March 1, 1760, married July 15, 1784, Elizabeth, daughter of James Stevenson, Esq. of South Park, in the County of Gloucester; by which lady (who died 1800), he has issue, Elizabeth, born June 1, 1785; Anne, born August 9, 1787; a still-born son, November 5, 1789; Mary, born November 20, 1791.

Precisely such had the paragraph originally stood from the printer's hands; but Sir Walter had improved it by adding, for the information of himself and his family, these words, after the date of Mary's birth: "Married, December 16, 1810, Charles, son and heir of Charles Musgrove, Esq. of Uppercross, in the county of Somerset," and by inserting most accurately the day of the month on which he had lost his wife.

Then followed the history and rise of the ancient and respectable family in the usual terms; how it had been first settled in Cheshire, how mentioned in Dugdale. serving the office of high sheriff, representing a borough in three successive parliaments, exertions of loyalty, and dignity of baronet, in the first year of Charles II, with all the Marys and Elizabeths they had married; forming altogether two handsome duodecimo pages, and concluding with the arms and motto: "Principal seat, Kellynch

Hall, in the county of Somerset," and Sir Walter's handwriting again in this *finale:*

Heir presumptive, William Walter Elliot, Esq., great grandson of the second Sir Walter.

Vanity was the beginning and end of Sir Walter Elliot's character: vanity of person and of situation. He had been remarkably handsome in his youth, and at fifty-four was still a very fine man. Few women could think more of their personal appearance than he did, nor could the valet of any new made lord be more delighted with the place he held in society. He considered the blessing of beauty as inferior only to the blessing of a baronetcy; and the Sir Walter Elliot, who united these gifts, was the constant object of his warmest respect and devotion.

His good looks and his rank had one fair claim on his attachment, since to them he must have owed a wife of very superior character to anything deserved by his own. Lady Elliot had been an excellent woman, sensible and amiable, whose judgment and conduct, if they might be pardoned the youthful infatuation which made her Lady Elliot, had never required indulgence afterwards. She had humored, or softened, or concealed his failings, and promoted his real respectability for seventeen years; and though not the very happiest being in the world herself, had found enough in her duties, her friends, and her children, to attach her to life, and make it no matter of indifference to her when she was called on to quit them. Three girls, the two eldest sixteen and fourteen, was an awful legacy for a mother to bequeath, an awful charge rather, to confide to the authority and guidance of a conceited, silly father. She had, however, one very intimate friend, a sensible, deserving woman, who had been brought, by strong attachment to herself, to settle close by her, in the village of Kellynch; and on her kindness and

advice Lady Elliot mainly relied for the best help and maintenance of the good principles and instruction which she had been anxiously giving her daughters.

This friend and Sir Walter did *not* marry, whatever might have been anticipated on that head by their acquaintance. Thirteen years had passed away since Lady Elliot's death, and they were still near neighbors and intimate friends, and one remained a widower, and the other a widow.

That Lady Russell, of steady age and character, and extremely well provided for, should have no thought of second marriage, needs no apology to the public, which is rather apt to be more unreasonably discontented when a woman *does* marry again, than when she *does not;* but Sir Walter's continuing in singleness requires explanation. Be it known, then, that Sir Walter, like a good father (having met with one or two private disappointments in very unreasonable applications), prided himself on remaining single for his dear daughter's sake. For one daughter, his eldest, he would really have given up anything, which he had not been very much tempted to do. Elizabeth had succeeded at sixteen to all that was possible of her mother's rights and consequence; and being very handsome, and very like himself, her influence had always been great, and they had gone on together most happily. His two other children were of very inferior value. Mary had acquired a little artificial importance by becoming Mrs. Charles Musgrove; but Anne, with an elegance of mind and sweetness of character, which must have placed her high with any people of real understanding, was nobody with either father or sister; her word had no weight, her convenience was always to give way—she was only Anne.

To Lady Russell, indeed, she was a most dear and highly valued goddaughter, favorite, and friend. Lady

Russell loved them all; but it was only in Anne that she could fancy the mother to revive again.

—JANE AUSTEN: *Persuasion*

Although Irving's *Rip Van Winkle* is probably familiar to most students, nevertheless another perusal of the description of Rip himself will serve to illustrate the way in which a master in the art of fiction sets forth his characters in the opening pages of his narrative.

RIP VAN WINKLE

In that same village, and in one of these very houses (which, to tell the precise truth, was sadly time-worn and weather-beaten), there lived many years since, while the country was yet a province of Great Britain, a simple good-natured fellow, of the name of Rip Van Winkle. He was a descendant of the Van Winkles who figured so gallantly in the chivalrous days of Peter Stuyvesant, and accompanied him to the siege of Fort Christina. He inherited, however, but little of the martial character of his ancestors. I have observed that he was a simple good-natured man; he was, moreover, a kind neighbor, and an obedient hen-pecked husband. Indeed, to the latter circumstance might be owing that meekness of spirit which gained for him such universal popularity, for those men are most apt to be obsequious and conciliating abroad, who are under the discipline of shrews at home. Their tempers, doubtless, are rendered pliant and malleable in the fiery furnace of domestic tribulation, and a curtain lecture is worth all the sermons in the world for teaching the virtues of patience and long-suffering. A termagant wife may, therefore, in some respects, be con-

sidered a tolerable blessing; and if so, Rip Van Winkle was thrice blessed.

Certain it is, that he was a great favorite among all the good wives of the village, who, as usual with the amiable sex, took his part in all family squabbles; and never failed, whenever they talked those matters over in their evening gossipings, to lay all the blame on Dame Van Winkle. The children of the village, too, would shout with joy whenever he approached. He assisted at their sports, made their playthings, taught them to fly kites and shoot marbles, and told them long stories of ghosts, witches, and Indians. Whenever he went dodging about the village, he was surrounded by a troop of them hanging on his skirts, clambering on his back, and playing a thousand tricks on him with impunity; and not a dog would bark at him throughout the neighborhood.

The great error in Rip's composition was an insuperable aversion to all kinds of profitable labor. It could not be from want of assiduity or perseverance; for he would sit on a wet rock, with a rod as long and heavy as a Tartar's lance, and fish all day without a murmur, even though he should not be encouraged by a single nibble. He would carry a fowling-piece on his shoulder for hours together, trudging through woods and swamps, and up hill and down dale, to shoot a few squirrels or wild pigeons. He would never refuse to assist a neighbor even in the roughest toil, and was the foremost man at all country frolics for husking Indian corn, or building stone-fences; the women of the village, too, used to employ him to run their errands, and to do such little odd jobs as their less obliging husbands would not do for them. In a word Rip was ready to attend to anybody's business but his own; but as to doing family duty, and keeping his farm in order, he found it impossible.

In fact, he declared it was of no use to work on his farm;

it was the most pestilent little piece of ground in the whole country; everything about it went wrong and would go wrong, in spite of him. His fences were continually falling to pieces; his cow would either go astray, or get among the cabbages; weeds were sure to grow quicker in his fields than anywhere else; the rain always made a point of setting in just as he had some outdoor work to do; so that his patrimonial estate had dwindled away under his management, acre by acre, until there was little more left than a mere patch of Indian corn and potatoes, yet it was the worst conditioned farm in the neighborhood.

His children, too, were as ragged and wild as if they had belonged to nobody. His son, Rip, an urchin begotten in his own likeness, promised to inherit the habits, with the old clothes of his father. He was generally seen trooping like a colt at his mother's heels, equipped in a pair of his father's cast-off galligaskins, which he had much ado to hold up with one hand, as a fine lady does her train in bad weather.

Rip Van Winkle, however, was one of those happy mortals, of foolish, well-oiled dispositions, who take the world easy, eat white bread or brown, whichever can be got with least thought or trouble, and would rather starve on a penny than work for a pound. If left to himself, he would have whistled life away in perfect contentment; but his wife kept continually dinning in his ears about his idleness, his carelessness, and the ruin he was bringing on his family. Morning, noon, and night, her tongue was incessantly going, and everything he said or did was sure to produce a torrent of household eloquence. Rip had but one way of replying to all lectures of the kind, and that, by frequent use, had grown into a habit. He shrugged his shoulders, shook his head, cast up his eyes, but said nothing. This, however, always provoked a

fresh volley from his wife; so that he was fain to draw off his forces, and take to the outside of the house—the only side which, in truth, belongs to a hen-pecked husband.

—Washington Irving: *Rip Van Winkle*

At times the outstanding qualities are presented by implication. This method was constantly employed by Robert Browning in his monologues. The most famous of these shorter monologues is the one called "My Last Duchess," which is printed below. A careful reading of the selection will disclose the fact that Browning, here as elsewhere, wrote the poem not for the story that it contained but rather because it enabled him to examine critically the nature of the person represented. One cannot read this selection without becoming aware of the suavity, the diplomacy, the selfishness, the avarice, and the maliciousness of the duke.

MY LAST DUCHESS

Ferrara

That's my last Duchess, painted on the wall,
Looking as if she were alive. I call
That piece a wonder, now: Fra Pandolf's hands
Worked busily a day, and there she stands.
Will't please you sit and look at her? I said
"Fra Pandolf" by design, for never read
Strangers like you that pictured countenance,
The depth and passion of its earnest glance,
But to myself they turned (since none puts by
The curtain I have drawn for you, but I)
And seemed as they would ask me, if they durst,
How such a glance came there; so, not the first

Are you to turn and ask thus. Sir, 'twas not
Her husband's presence only, called that spot
Of joy into the Duchess' cheek: perhaps
Fra Pandolf chanced to say, "Her mantle laps
Over my lady's wrist too much," or "Paint
Must never hope to reproduce the faint
Half-flush that dies along her throat": such stuff
Was courtesy, she thought, and cause enough
For calling up that spot of joy. She had
A heart—how shall I say?—too soon made glad,
Too easily impressed; she liked whate'er
She looked on, and her looks went everywhere.
Sir, 'twas all one! My favor at her breast,
The dropping of the daylight in the West,
The bough of cherries some officious fool
Broke in the orchard for her, the white mule
She rode with round the terrace—all and each
Would draw from her alike the approving speech,
Or blush, at least. She thanked men,—good! but thanked
Somehow—I know not how—as if she ranked
My gift of a nine-hundred-years-old name
With anybody's gift. Who'd stoop to blame
This sort of trifling? Even had you skill
In speech—(which I have not)—to make your will
Quite clear to such an one, and say, "Just this
Or that in you disgusts me; here you miss,
Or there exceed the mark"—and if she let
Herself be lessoned so, nor plainly set
Her wits to yours, forsooth, and made excuse,
—E'en then would be some stooping; and I choose
Never to stoop. Oh sir, she smiled, no doubt,
Whene'er I passed her; but who passed without
Much the same smile? This grew; I gave commands;
Then all smiles stopped together. There she stands
As if alive. Will't please you rise? We'll meet

The company below, then. I repeat,
The Count your master's known munificence
Is ample warrant that no just pretence
Of mine for dowry will be disallowed;
Though his fair daughter's self, as I avowed
At starting, is my object. Nay, we'll go
Together down, sir. Notice Neptune, though,
Taming a sea-horse, thought a rarity,
Which Claus of Innsbruck cast in bronze for me!

—Robert Browning

EXERCISE

Character sketches may be prepared in several ways: (1) personality may be made to appear by describing the appearance and facial expression of the subject; (2) it may be made clear by telling of the subject's actions; (3) it may be made evident by what he says; or (4) it may be set forth by an analysis of the motives, actions, words, and appearance of him whose character is being considered.

Write a character sketch, choosing one of the subjects mentioned below or a similar one taken from your own experience. Try to employ just one of the methods mentioned above. After you have prepared your sketch by some one of these methods, endeavor to portray the same character and get the same result by using one of the other three methods.

An Actor	A National Hero
My Roommate	Our Football Coach
The Ward Boss	The Section Boss
My Best Friend	A Town Character
A Prominent Citizen	My Friend the Captain

CHAPTER V

Literary Forms

The Familiar Essay

The familiar essay, under the guise of an unconventional, and sometimes an apparently incoherent conversational style, tries to impress on the reader an important bit of philosophy about human life or action; comments on some personal belonging or idea; or brings to the reader's attention, in a thoroughly informal fashion, some important reading of life, manners, or thought. Stevenson's "An Apology for Idlers" is an interesting discussion of the value of an occasional vacation. L. H. Bailey's "The Realm of the Commonplace" is an attempt to show the value of going through life with our senses alert. Charles Lamb's "Old China" is a pleasing dissertation on the joy of collecting articles, antique and strange, especially when each new acquisition necessitates some sacrifice.

In many respects, the familiar essay is the most interesting of all the prose forms. It is strictly personal and wanders where it will. It follows rules when it suits its pleasure and breaks them when it desires to do so. If essays are to prose what lyrics are to verse, then the characteristics of the familiar

essay which are enumerated below make it the most delightful of all the essay forms. It is never didactic; it never offends. It is always buoyant, always brilliant. It is filled with pithy sayings. It is saturated with humor. It fairly exudes good will. It is pregnant with a vast knowledge of books, of men, of nature, of things in general. It makes everything it touches companionable. It has, as W. J. Dawson and Coningsby Dawson put it, the "world-wideness" of Goldsmith. It has, too, they might have added, the tenderness and conscious humor of Lamb, and the stylistic power and intimacy of Stevenson.

The familiar essay is not the easiest form to write. It presupposes too much: knowledge, kindliness, and a knack for saying well what one has to say. It has no limitations. The writer of the familiar essay may wander where he will; he may take with him companions or he may go alone, as suits his convenience. His conversation may be of men or of books; it may be concerned with machines or with gods; it may extol nature or gibe at music halls; it may praise "jazz" or satirize prudery; it may chat about history or delve into science; it may tell of the hopes of men or it may dwell on their idiosyncracies. It may preserve the utmost decorum of language or it may be strikingly unconventional or even colloquial. It may be condescendingly familiar or obsequiously polite. But whatever

attitude it takes, it must never be vulgar. The writer of the familiar essay is always a gentleman.

He is not, however, the gentleman always dressed and accoutered for the street. He may be the gentleman, in dressing gown and slippers, sitting at ease before the fire reflecting mentally or aloud on life, on the day's happenings, or on the outlook for the morrow. He may be the gentleman, face belathered, standing razor in hand before the mirror, commenting to whoever may be in hearing on whatsoever enters his mind. He may even be the gentleman, collar and necktie off, vest and coat on the hanger, one suspender down and the other in process, ruminating on the events of the day, as lazily and with some regret he prepares for bed. Whatever his conversation, or wherever it is uttered —at home, in the club, on the street, in the theater, at church, in the country, or by the sea—the conversation, the talk of the familiar essayist is always the conversation and the talk of a gentleman.

The familiar essayist is also a philosopher. He is not necessarily one who knits his brows and peers out through half-closed eyes at the world while he lays before it in *ex-cathedra* tones his important observations about life, death, and immortality. He is rather the epigrammatist who seems to snap an observation at you or to enunciate lazily some great truth without seeming to have thought of it until that very moment and then to have given it *extempore* and spontaneously. What he says and

writes does not sound bookish, nor does it smell of the lamp. He does not seem to have gone about consciously picking up his information, but he gives the impression that he is a vast storehouse of all sorts of knowledge that, like Topsy, "just grew" there without effort on his part. His knowledge has the air of homely wisdom and deep insight, got mainly by a keen observation that peers out of what, to the uninitiated, seem to be great unseeing, staring, frank eyes.

Although you may not know where he got his knowledge, for it has not a studied air about it, unconsciously you are impressed by the feeling that the familiar essayist knows intimately whatever he chats about. He inspires you with the conviction that he has not said the half of what he might say about the subject under discussion. He has given you only a glimpse; and, before you are aware that he has said all he intends to say, he is off again on another tack that opens up new vistas and suggests new thoughts. He is never still; he never spends too much time on any subject; he never tries to exhaust any topic of conversation. His object is merely to comment on men and things. He does not seem to care to examine them with the acumen of the critic or with the finality of the scientist. In spite of all this, he never leaves any subject without having given you a new peephole to view it through or a new angle from which to consider it. And he does these things in this way because

he knows whereof he speaks and because he has learned how to whet one's appetite.

Again, the familiar essayist is never dull. Everything he touches he brightens. His wit, flitting hither and yon, like a butterfly on a summer day as it goes from one blossom to another, touches all that he considers lightly and lovingly. Like the butterfly, too, wherever his wit alights, that spot seems more beautiful because of his presence there. His words may drawl or they may rattle on at break-neck pace: in either case, so subtle are his words and so buoyant are his spirits that you hang on every sentence. Now his wit scintillates and sparkles; now it is killingly droll. His spirits rise and fall like the waves of the sea. At one minute, without seeming to try, he brings the smile; the next, the laugh; and before we realize what has happened, we feel the stirrings of pity and breathe the sigh of despair. Then, lest we be too sad, he is off again, like a will-o'-the-wisp, leading us on to new pleasures.

Finally, whatever the familiar essayist writes of is intimately personal. The familiar essay can never be objective. Its charm is personality, and the more strongly a pleasing personality shines through the essay, the finer, as a rule, it is as a familiar essay. Even though it deal with matters that seem to be impersonal, the thought, the gayety, the brilliance of the essayist must shine through. One feels instinctively, when one has read a familiar essay, that only the person whose name is affixed to that

essay could have written it. It bears indelibly his stamp, as in the essay which follows.

ON GETTING UP ON COLD MORNINGS

An Italian author—Giulio Cordara, a Jesuit—has written a poem upon insects, which he begins by insisting that those troublesome and abominable little animals were created for our annoyance, and that they were certainly not inhabitants of Paradise. We of the north may dispute this piece of theology; but on the other hand, it is as clear as the snow on the housetops, that Adam was not under the necessity of shaving; and that when Eve walked out of her delicious bower, she did not step upon ice three inches thick.

Some people say it is a very easy thing to get up of a cold morning. You have only, they tell you, to take the resolution; and the thing is done. This may be very true; just as a boy at school has only to take a flogging, and the thing is over. But we have not at all made up our minds upon it; and we find it a very pleasant exercise to discuss the matter, candidly, before we get up. This, at least, is not idling, though it may be lying. It affords an excellent answer to those who ask how lying in bed can be indulged in by a reasoning being—a rational creature. How? Why, with the argument calmly at work in one's head, and the clothes over one's shoulder. Oh! it is a fine way of spending a sensible, impartial half hour.

If these people would be more charitable they would get on with their argument better. But they are apt to reason so ill, and to assert so dogmatically, that one could wish to have them stand round one's bed, of a bitter morning, and lie before their faces. They ought to hear both sides of the bed, the inside and out. If they cannot entertain themselves with their own thoughts for half an hour or so, it is not the fault of those who can. If their will is

never pulled aside by the enticing arms of imagination, so much the luckier for the stage-coachman.

Candid inquiries into one's recumbency, besides the greater or less privileges to be allowed a man in proportion to his ability of keeping early hours, the work given his faculties, etc., will at least concede their due merits to such representations as the following. In the first place, says the injured but calm appealer, I have been warm all night, and find my system in a state perfectly suitable to a warm-blooded animal. To get out of this state into the cold, besides the inharmonious and uncritical abruptness of the transition, is so unnatural to such a creature, that the poets, refining upon the tortures of the damned, make one of their greatest agonies consist in being suddenly transported from heat to cold—from fire to ice. They are "haled" out of their "beds," says Milton, by "harpy-footed furies"—fellows who come to call them. On my first movement towards the anticipation of getting up I find that such parts of the sheets and bolster as are exposed to the air of the room are stone-cold. On opening my eyes, the first thing that meets them is my own breath rolling forth, as if in the open air, like smoke out of a chimney. Think of this symptom. Then I turn my eyes sideways and see the windows all frozen over. Think of that. Then the servant comes in. "It is very cold this morning, is it not?"—"Very cold, sir."—"Very cold indeed, isn't it?"—"Very cold indeed, sir."—"More than usually so, isn't it, even for this weather?" (Here the servant's wit and good nature are put to a considerable test, and the inquirer lies on thorns for the answer.) "Why, sir . . . I think it is." (Good creature! There is not a better or more truth-telling servant going.) "I must rise, however; get me some warm water."—Here comes a fine interval between the departure of the servant and the arrival of the hot water; during which, of course,

it is of "no use" to get up. The hot water comes. "Is it quite hot?"—"Yes, sir."—"Perhaps too hot for shaving; I must wait a little?"—"No, sir; it will just do." (There is an over-nice propriety sometimes, an officious zeal of virtue, a little troublesome.) "Oh—the shirt—you must air my clean shirt; linen gets very damp this weather." —"Yes, sir." Here another delicious five minutes. A knock at the door. "Oh, the shirt—very well. My stockings—I think the stockings had better be aired, too."—"Very well, sir." Here another interval. At length everything is ready, except myself. I now, continues our incumbent (a happy word, by the bye, for a country vicar)—I now cannot help thinking a good deal —who can?—upon the unnecessary and villainous custom of shaving: it is a thing so unmanly (here I nestle closer) —so effeminate (here I recoil from an unlucky step into the colder part of the bed). No wonder that the Queen of France took part with the rebels against that degenerate king, her husband, who first affronted her smooth visage with a face like her own. The Emperor Julian never showed the luxuriancy of his genius to better advantage than in reviving the flowing beard. Look at Cardinal Bembo's picture—at Michelangelo's—at Titian's—at Shakespeare's—at Fletcher's—at Spenser's—at Chaucer's—at Alfred's—at Plato's. I could name a great man for every tick of my watch. Look at the Turks, a grave and otiose people. Think of Haroun Al Raschid and Bed-ridden Hassan. Think of Wortley Montague, the worthy son of his mother, above the prejudice of his time. Look at the Persian gentlemen, whom one is ashamed of meeting about the suburbs, their dress and appearance are so much finer than our own. Lastly, think of the razor itself—totally opposed to every sensation of bed—how cold, how edgy, how hard! how utterly different

from anything like the warm and circling amplitude, which

> Sweetly recommends itself
> Unto our gentle senses.

Add to this, benumbed fingers, which may help you to cut yourself, a quivering body, a frozen towel, and a ewer full of ice; and he that says there is nothing to oppose in all this, only shows that he has no merit in opposing it.

Thomson the poet, who exclaims in his Seasons—

> Falsely luxurious! Will not man awake?

used to lie in bed till noon, because he said he had no motive in getting up. He could imagine the good of rising; but then he could also imagine the good of lying still; and his exclamation, it must be allowed, was made upon summer time, not winter. We must proportion the argument to the individual character. A money-getter may be drawn out of his bed by three or four pence; but this will not suffice for a student. A proud man may say, "What shall I think of myself, if I don't get up?" but the more humble one will be content to waive this prodigious notion of himself, out of respect to his kindly bed. The mechanical man shall get up without any ado at all; and so shall the barometer. An ingenious lier in bed will find hard matter of discussion even on the score of health and longevity. He will ask us for our proofs and precedents of the ill effects of lying later in cold weather; and sophisticate much on the advantages of an even temperature of body; of the natural propensity (pretty universal) to have one's way; and of the animals that roll themselves up and sleep all the winter. As to longevity, he will ask whether the longest is of necessity the best; and whether Holborn is the handsomest street in London.

—Leigh Hunt: *Essays*

COLLECTING: A BENEFICENT GERM *

It is one of my happy beliefs that most people like old furniture. You see, I prefer to think the best of human nature, and what better best is there than admiring the careful beauty of the past, fashioned in those days when "most exquisite joiners"—that's Benjamin Franklin's phrase!—worked at a craft they loved enough to make perfect? Besides, all the time, letters come to me from every state in the Union, telling me of some symbol of bygone days which the writers have bought, or inherited, or discovered afresh in an unnoticed belonging that had "always been about the house," and which they never before had valued.

For an instance, yesterday's mail brought me, from Ohio, news of a blue and white double-woven coverlet with that much sought for Boston Town border, one fair year's record of some busy woman's life. This morning another enthusiast wrote me from Long Island of a stenciled mantel clock with carved claw-feet and hospitable pineapples atop. And so it goes; you can collect from Maine to California if you are inclined, and most people *are* inclined in this present year of grace.

I want something right now; something I never shall have, alas—my great-grandmother's mirror. Some distant cousin, below Mason and Dixon's line, owns it, I suppose. (That's the real tragedy of large families. There never are heirlooms enough to go all the way round!) I don't even know precisely what it is like. But I will hazard a guess that it was one of those "tabernacle" mirrors, straight-lined and oblong, with reeded or delicately roped columns, and a glass divided by a narrow band of mahogany.

I want it to hang over the table where she sat busily at

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work, her nimble fingers flying, her mind engaged with her household affairs. Where I live now there is a large and prevailing opinion that Southern women are indifferent housekeepers. And I always wonder when I hear it, for every bit of the orderliness which is mine came to me from the South, while all my "upsidedownness" is a legacy from Newburyport. And so, you see, this Empire table, made over a century ago by some "exquisite joiner" in Tennessee, is more than just a piece of furniture; it is a memory of my family's past. Not that it isn't engaging enough to exist on its own merits, for it is beautifully built, and the wood, always sound and excellent, has been bequeathed an added loveliness by Time. Black cherry is a favorite wood of mine; there is so much life in it; in a dark surface little pin points and speckles of light, and when the sun strikes it, it catches fire, it glows! That's what my great-grandmotherly table is made of, black cherry with a veneer of mahogany on the straight drawer fronts. Brass lions' heads hold ring-pulls in their mouths, and there is no central pedestal—it is an earlier type—but rope-carved legs support it, and below is a curved shelf. Altogether it is a fine example of what Empire can be; I have seen just one other which resembles it, and since that came from South Carolina, I am justified in my belief that is a completely Southern type.

But this table, and some old silver and glass, are all that came to me from the past, and quite naturally, you can't furnish a whole house on just memories. (Though, I fancy, some people think I have, for, recently, requests have come in to our little library for a book entitled *The House with Nothing in It!*) Now, if you also are of this persuasion, I really ought to show you two climaxes in my collection: my Hepplewhite bed and my banister-back chair.

My bed is tall and slender and lovely and, tradition

has it, once belonged to Daniel Webster's roommate when together they lived in our little South Chamber. But this I don't credit for a moment; the posts are quite seven feet high, and the square uncompromising tester could never have fitted into that rounded, lowroofed space. English I am sure it is. The reeded columns and the shapely, carved urns from which they rise, are more than faintly reminiscent of Hepplewhite; they almost precisely resemble one of the dėsigns from his own book. Oh, how I wanted that bed! It was in the attic of a little brick house in that small, quiet village of Norwich which lies just across the river from Our Town. The dear old ladies who owned it didn't use it and didn't want to, but they dilly-dallied and shilly-shallied, they wouldn't, till, at last, along came our Favorite Dealer, and bought it all unknowing that my desirous eyes had been fixed on it for many months. And then, noble-hearted man, when he heard of my chagrin, he let me have it for just what he paid. All of which compels me to give you a bit of collecting advice. *Never antagonize a dealer!* So often he has it in his power to do you a kindness, and so oftentimes he will.

Still, I am occasionally glad that other people are irritating. Because if the Big Dealer of our vicinity had not been blessedly, though temporarily, incensed against one of the smaller fry in the business, my beloved chair would have been forever lost to me. I shall always remember the day I first saw it, saw it and fell in love with it as I have with no other piece of furniture.

It was sitting in the front room of a shabby cottage—the man kept his "finds" all over the house—and it was so fair and stately that it lent a dignity even to the wretched trash which surrounded it. The owner wasn't at home but I didn't care to await his return, and I pur-

sued him through the labyrinth of mud that was the State Fair grounds that year, and found him selling tickets.

Of course a bannister back is a country cousin of the Restoration chair, and mine has, in its base, the Jacobean baluster and pear turning, so characteristic of that period. But with an excellent difference: the pear is a double one, a detail I have seen in no other chair. The flaring Spanish feet (which some authorities say came into England when Charles the Second married Catherine of Braganza) step forward with dignity, and there are two crests. The upper is not, as most of the English chairs were, carved with a crown, but is adorned with three hearts, just as American samplers were spaced with hearts instead of the monarchical emblem of the old century, and thus I know that my dear chair is as much of our own land as the oak and maple of which it was made when the eighteenth century was very young indeed.

It must have been brought by oxcart or river boat up from Massachusetts or Connecticut, and when it had reached its final destination (a town a few miles south of us) it was venerable enough to be unconsidered, and placed in the attic or on the porch, or up in a boy's room. I'm sure; because the lower crest is carved, too, not with hearts but with the date, 1771, crudely cut out by a jackknife. No girl would have done it, you know, and sometimes I wonder if this experimenting boy, grown a few years older, might not have marched away to fight in our Revolutionary army.

Ah, I do love my chair; for its beauty, for its presence, its "personalness," and, most of all, perhaps, because it is that highest happiness for the real collector, a bit of tangible history.

—Alice Van Leer Carrick: *McNaught's Monthly*

EXERCISES

I. It is suggested that each student be required to find in current literature and in the literature of other days examples of familiar essays. Comment should then be made upon the subject of the essay, its structure, its style, its diction. In this way the method pursued by masters of the form will become more readily apparent.

Familiar essays are not difficult to find. A number of names of authors, both of the present and of the past, spring almost immediately to one's mind: Charles Lamb, "Christopher North," William Hazlitt, Robert Louis Stevenson, Leigh Hunt, Gilbert Chesterton, A. C. Benson, Christopher Morley, William McFee, Oliver Wendell Holmes, George William Curtis, E. V. Lucas, and Richard Crothers. In addition, some of the magazines of the present day contain a department devoted to familiar or informal essays. The Contributor's Column in *The Atlantic Monthly*, and The Lion's Mouth in *Harper's Magazine* are two outstanding places where one may find this type of writing. Scarcely a magazine or a newspaper exists that does not frequently contain these pleasant, witty contributions.

II. The following subjects are suggested as capable of familiar treatment. They, in turn, may suggest other subjects. It might be advisable to have the list extended considerably by suggestions from the

class before an exercise in writing this type of composition is assigned.

Collecting
Billboards
On Loafing
Pin Money
Expectations
"Lounge Lizards"
Paying the Piper
A Lady's Library
On Being "Rushed"
On Being a Good Fellow
On Riding in the Country
On Catching up with Father
Buying a Wedding Present
On Living in Glass Houses
The Apartment-House Elevator
Hoodlums
Wall Flowers
The "Tea Hound"
Two Out and ——
Playing the Game
Public Manners
City Traffic
On Getting Shaved
On Dining Out
On Being a Grind
On Going to the Movies
On Coming Home Late
On Putting out the Cat
On Partners and Dancing
On Living in the Suburbs

Exposition in Literature

Every book of fiction, whether it be a novel, a play, or a narrative poem, provides the reader at the outset with information about the locality in which the story is laid, about the characters as they are at the opening of the tale, about the situation with which the book begins. This information is generally spoken of as the background, although in plays it is definitely called the "Exposition." Exposition it is in the truest sense; it is an explanation of the situation and a setting forth of such other matters as the reader must know in order that he may understand what is to follow.

An example or two will serve to show the nature of these expositions and to explain how they are used in literary productions.

Let us consider first one of Shakespeare's best-known plays, *Macbeth*.

The tragedy in *Macbeth* consists in the downfall of Macbeth. The play shows how his lack of stamina and his consequent disloyalty brought loss of friends, moral fear, and, finally, death. In order that we may appreciate the tragedy and understand its purifying effect, it is necessary that we should know at the outset what kind of person Macbeth is. Accordingly, through the first act, we are told of his bravery, of his feeling of loyalty, and of the good will of the king toward him. We learn, also, of his ambitions and of the ambitions of his wife. We see his superstitious nature at work. We are introduced to Duncan's two sons, who stand between Macbeth and the throne. In many respects, the exposition is a character sketch of Macbeth. The artistry with which it is done is traceable to the skill with which the apparently heterogeneous facts are assembled. Nothing that is necessary for our understanding of the play is omitted, and nothing is told that is extraneous. This information is the exposition of the play.

Look now at the opening scene of another Shakespearean play, *Antony and Cleopatra*.

The scene is a room in the palace of Cleopatra, in Alexandria.

Enter DEMETRIUS *and* PHILO.

Phi.
Nay, but this dotage of our general's
O'erflows the measure: those his goodly eyes,
That o'er the files and musters of the war
Have glow'd like plated Mars, now bend, now turn,
The office and devotion of their view
Upon a tawny front: his captain's heart,
Which in the scuffles of great fights hath burst
The buckles on his breast, reneges all temper,
And is become the bellows and the fan
To cool a gypsy's lust. Look, where they come!

Flourish. Enter ANTONY *and* CLEOPATRA, *with their Trains; Eunuchs fanning her.*

Take but good note, and you shall see in him
The triple pillar of the world transform'd
Into a strumpet's fool: Behold and see.
Cleo. If it be love indeed, tell me how much.
Ant. There's beggary in the love that can be reckon'd.
Cleo. I'll set a bourn how far to be belov'd.
Ant. Then must thou needs find out new heaven, new earth.

Enter an Attendant.

Att. News, my good lord, from Rome.
Ant. Grates me; the sum.
Cleo. Nay, hear them, Antony:
Fulvia, perchance, is angry; or, who knows
If the scarce-bearded Caesar have not sent
His powerful mandate to you, "Do this, or this;
Take in that kingdom, and enfranchise that;
Perform't, or else we damn thee."
Ant. How, my love!

Cleo. Perchance,— nay, and most like,
You must not stay here longer, your dismission
Is come from Caesar; therefore hear it, Antony.
Where's Fulvia's process? Caesar's I would say?—
both?—
Call in the messengers. As I am Egypt's queen,
Thou blushest, Antony, and that blood of thine
Is Caesar's homager; else so thy cheek pays shame
When shrill-tongu'd Fulvia scolds. The messengers!

Ant. Let Rome in Tiber melt, and the wide arch
Of the rang'd empire fall! Here is my space.
Kingdoms are clay: our dungy earth alike
Feeds beast as man: the nobleness of life
Is to do thus; when such a mutual pair,
[*Embracing*]
And such a twain can do't, in which I bind,
On pain of punishment, the world to weet
We stand up peerless.

Cleo. Excellent falsehood!
Why did he marry Fulvia, and not love her?—
I'll seem the fool I am not; Antony
Will be himself.

Ant. But stirr'd by Cleopatra.
Now, for the love of Love, and her soft hours,
Let's not confound the time with conference harsh;
There's not a minute of our lives should stretch
Without some pleasure now. What sport tonight?

Cleo. Hear the ambassadors.

Ant. Fie, wrangling queen!
Whom everything becomes, to chide, to laugh,
To weep; whose every passion fully strives
To make itself, in thee, fair and admir'd.
No messenger but thine; and all alone

Tonight we'll wander through the streets, and note
The qualities of people. Come, my queen;
Last night you did desire it, speak not to us.

Exeunt Ant. and Cleo. with their train.

Dem. Is Caesar with Antonius priz'd so slight?
Phi. Sir, sometimes, when he is not Antony,
He comes too short of that great property
Which still should go with Antony.
Dem. I am full sorry,
That he approves the common liar, who
Thus speaks of him at Rome; but I will hope
Of better deeds tomorrow. Rest you happy!
[*Exeunt.*]

Here is condensed in sixty-two lines all the information for understanding the plot of a play that occupies ninety-four printed pages. Here we learn of the change that has come over warlike Antony and how his military prowess and fighting ability have been forgotten as he stays in Egypt spending his days in doting on Cleopatra. Then, as with a wave of the hand, this one-third ruler of the world enters at the side of Cleopatra. His dotage and her charm are immediately evident. Evident, too, is her ability to wheedle, to coax, to flay, and to gibe. And all this appears in the few lines devoted to the speeches of the two. Then, tersely and with consummate skill, each sums up the other. Cleopatra's words are direct, "I'll seem the fool I am not; Antony will be himself," and Antony betrays how deeply he has fallen into Egypt's net:

Fie, wrangling queen!
Whom everything becomes, to chide, to laugh,
To weep; whose every passion fully strives
To make itself, in thee, fair and admir'd!

In this scene, too, are the items we need to know of the conditions in Rome. We are told that Antony is already wed to Fulvia; that Caesar has begun to feel himself master of the world; that Caesar's attitude is irksome to Antony; and that common report in Rome upbraids Antony for his actions in Alexandria. Here is the background for the story. This is the exposition of the situation.

The first five or six pages of Dickens's *Christmas Carol* provide us with the exposition of that pleasing story. There we learn of Scrooge, and Marley, and of the Cratchits. We learn of their dispositions, their home life; and, in a measure, we know what to expect of them. Robert Burns takes seventy-eight lines of "Tam O' Shanter" for the exposition of his tale; Longfellow uses fourteen lines to explain the situation in "Paul Revere's Ride." John Hay uses three of the seven stanzas of "Jim Bludso" for the same purpose.

Notice the following introductory paragraphs from Bret Harte's "The Luck of Roaring Camp."*

There was commotion in Roaring Camp. It could not have been a fight, for in 1850 that was not novel enough to have called together the entire settlement. The ditches

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and claims were not only deserted, but "Tuttle's" grocery had contributed its gamblers, who, it will be remembered, calmly continued their game the day that French Pete and Kanaka Joe shot each other to death over the bar in the front room. The whole camp was collected before a rude cabin on the outer edge of the clearing. Conversation was carried on in a low tone, but the name of a woman was frequently repeated. It was a name familiar enough in the camp, "Cherokee Sal."

Perhaps the less said of her the better. She was a coarse, and, it is to be feared, a very sinful woman. But at that time she was the only woman in Roaring Camp, and was just then lying in sore extremity, when she most needed the ministration of her own sex. Dissolute, abandoned, and irreclaimable, she was yet suffering a martyrdom hard enough to bear even when veiled by sympathizing womanhood, but now terrible in her loneliness. The primal curse had come to her in that original isolation which must have made the punishment of the first transgression so dreadful. It was, perhaps, part of the expiation of her sin, that, at the moment when she most lacked her sex's intuitive tenderness and care, she met only the half-contemptuous faces of her masculine associates. Yet a few of the spectators were, I think, touched by her sufferings. Sandy Tipton thought it was "rough on Sal," and, in the contemplation of her condition, for a moment rose superior to the fact that he had an ace and two bowers in his sleeve.

It will be seen, also, that the situation was novel. Deaths were by no means uncommon in Roaring Camp, but a birth was a new thing. People had been dismissed the camp effectively, finally, and with no possibility of return; but this was the first time that anybody had been introduced *ab initio*. Hence the excitement.

"You go in there, Stumpy," said a prominent citizen

known as "Kentuc," addressing one of the loungers. "Go in there, and see what you kin do. You've had experience in them things."

Perhaps there was a fitness in the selection. Stumpy, in other climes, had been the putative head of two families; in fact, it was owing to some legal informality in these proceedings that Roaring Camp—a city of refuge—was indebted to his company. The crowd approved the choice, and Stumpy was wise enough to bow to the majority. The door closed on the *extempore* surgeon and midwife, and Roaring Camp sat down outside, smoked its pipe, and awaited the issue.

The assemblage numbered about a hundred men. One or two of these were actual fugitives from justice, some were criminal, and all were reckless. Physically, they exhibited no indication of their past lives and character. The greatest scamp had a Raphael face, with a profusion of blond hair; Oakhurst, a gambler, had the melancholy air and intellectual abstraction of a Hamlet; the coolest and most courageous man was scarcely over five feet in height, with a soft voice and an embarrassed, timid manner. The term "roughs" applied to them was a distinction rather than a definition. Perhaps in the minor details of fingers, toes, ears, etc., the camp may have been deficient, but these slight omissions did not detract from their aggregate force. The strongest man had but three fingers on his right hand; the best shot had but one eye.

Such was the physical aspect of the men that were dispersed around the cabin. The camp lay in a triangular valley, between two hills and a river. The only outlet was a steep trail over the summit of a hill that faced the cabin, now illuminated by the rising moon. The suffering woman might have seen it from the rude bunk whereon she lay—seen it winding like a silver thread until it was lost in the stars above.

A fire of withered pine boughs added sociability to the gathering. By degrees the natural levity of Roaring Camp returned. Bets were freely offered and taken regarding the result. Three to five that "Sal would get through with it"; even, that the child would survive; side bets as to the sex and complexion of the coming stranger. In the midst of an excited discussion an exclamation came from those nearest the door, and the camp stopped to listen. Above the swaying and moaning of the pines, the swift rush of the river, and the crackling of the fire rose a sharp, querulous cry—a cry unlike anything heard before in the camp. The pines stopped moaning, the river ceased to rush, and the fire to crackle. It seemed as if Nature had stopped to listen too.

These paragraphs, it will be observed, give the setting of the famous story that is concerned with the way in which a child born among these rough and crude miners made over the camp and brought all of its members to worship at his feet.

No given amount can be assigned to the expository part of a narrative. Everything depends on the circumstances of the story and the nature of the plot as well as upon the general knowledge that exists about the tale that is being told. Often, it happens, that the author will extend his explanatory remarks through a considerable portion of the book and, by so doing, sustain the suspense of the reader.

Some stories are entirely expository in their nature. Of this character are the so-called detective stories. Although we are supposed to be reading them primarily for the narrative, in reality we read

them to learn *how* the mystery with which they are concerned is unraveled. When we have finished the analysis that the author makes of the events of the story, we have been treated to an exposition of a criminal investigation. We have been told how that investigation was made.

Perhaps the most interesting type of literary exposition is the problem or thesis novel or play. The writers of these productions usually assert that they have no desire to prove a thesis or to put in motion a propaganda. If we were, in every instance, to take them at their word there would be no difficulty in proving the assertion that their books are expositions rather than novels. Unfortunately, however, too often the author becomes a special pleader and his volume becomes a poorly concealed argument for this proposition or that.

There do exist, nevertheless, many examples of fiction and drama that are almost wholly expository. It is true that in practically every instance the author, in an endeavor to prove that he is a novelist rather than an essayist, urges that his story deals with a group of persons different from all others. To the general reading public this appears to be the true statement of the case; to the thinking public, on the other hand, it becomes only too evident that the characters are no more individualized than were the old characters in the morality plays or than Christian and his companions in *Pilgrim's Progress*. Under such conditions, the "reading of life" that lies

behind the author's puppets, the understanding of men, women, and conditions that their actions and speeches evince lifts the petty characters out of the play or novel and establishes them as generalizations about the life that the author knows. Then it is that these characters cease to be individuals and their actions cease to be only theirs. Their story becomes an exposition of a special group, each character typifying some phase of the age out of which he is supposed to have come. Perhaps the detailed events that Mr. Galsworthy portrays in *Loyalties* could have occurred only to the actual group represented in the play, but the various types of loyalty that are exemplified in the play are the types that in varying degrees we find all about us. In a great measure, the play is an essay on the theme of Loyalty.

When Ibsen asserted that his plays were not propaganda, that he himself was not a special pleader but rather a surgeon probing the sore spots of the society of his time that he might better understand its diseases and, by making them known, bring to society a realization of its shortcomings, he was asserting in other words the principle that is being set forth here. If you are willing to take him at his word, then Nora in *The Doll's House* ceases to be only Thorwald's wife and becomes typical of a thousand other Noras, as Thorwald becomes typical of a thousand other Thorwalds. Doctor Stockman in *An Enemy of the People* becomes the type of the

altruistic reformer and his fate becomes a warning to all who would help those who do not desire to be helped. Similarly, Mrs. Alving becomes another sort of Nora, mothering her son who is damned by a terrible heritage, just as Nora mothers her husband, who is damned by egotism and love of respectability until he cannot appreciate the love that his wife has showered upon him.

When Galsworthy tells us of *The Patricians*, he is reading English aristocracy for us. We may complain that Eustace and his sister should have acted more independently than they did, should have rebelled against their system rather than have submitted to it; but, had they done so, Mr. Galsworthy would have laid himself open to the criticism that he had failed to do what he set out to do, namely, to represent English society gripped and held by its traditions and its creeds.

In these random examples, culled from hundreds that might have been used, it is apparent that what may pass on the shelves of the bookstore as a novel or a play may be as truly an exposition as is Macaulay's description of the coffee house or Huxley's lecture on a piece of chalk. What matters the coating in which the form appears: quinine put in sugar-coated pills is as truly quinine as though it were taken in the raw state. In the cases mentioned, the novel or the play method is the sugar coating for the exposition form. It is like Nelson's coat and patch of which Alfred Noyes speaks:

O, what matters the uniform,
Or the patch on your eye or your pinned-up sleeve,
If your soul's like a North Sea storm?

Many of our novelists and playwrights have assumed the disguise; they have put on the patch and pinned up the sleeve, or they have mounted the back of a cart and in motley have acted before us so that, under cover of something to while away a pleasant hour or two, they might regale us with a sociological treatise or a philosophical argument.

EXERCISES

I. Examine carefully a novel, a short story, a play, and a narrative poem and determine how much of what precedes the story proper is necessary for you to know in order to understand the story that follows. When you have completed your investigation, write a summary of this expository material or background. Be sure that none of the story itself is included in the summary.

II. Make a list of six modern novels and six modern plays that are above the level of mere popularity; then ask yourself, "How many of these are really examples of literary exposition and how many of them are just stories?" In a four-hundred-word theme justify your position.

III. Select a novel or a play from the works of such men as Galsworthy, Wells, Shaw, or Ibsen and, after reading it carefully, write an exposition of the theme or thesis of that play or novel.

CHAPTER VI

Technical Expositions

General Consideration. The expository forms considered in this chapter deal with general or typical conditions rather than with individual cases, unless the individual case possesses no unusual characteristics that would cause it to differ materially from the general case. In fact, the whole method employed in this group is what is known in logic as "generalization." The resulting exposition is a record of those resemblances that are found in similar actions, things, or notions. For example: no two men are exactly alike. They differ in size, in features, in coloring, in weight, and so forth. Nevertheless, one may find in a book on Physiology or Anatomy generalized descriptions of the animal called man so that the reader may be able to distinguish a man when he sees him. Similarly, no two pieces of mechanism, no two flowers, no two pictures can be exactly alike. It is possible, nevertheless, to write generalized descriptions of all of them.

The typewriter is an excellent illustration of the differences that exist in mechanisms. Although typewriters of the same make may be constructed ever so carefully by a standardized process experts

can nevertheless detect differences in the machines when the writing done by the machines is offered for comparison. Besides these differences in the machines made by any one company, the machines made by the various companies differ greatly one from the other. The Remington, the L. C. Smith, the Royal, the Underwood, all have characteristics that are unique in them. All of them, on the other hand, have enough characteristics in common for one to prepare a satisfactory exposition of the device known as the typewriter without describing any one of these machines in particular. It is also possible to write a generalized description of any one of these makes without going into detail about the differences between the machines of Brown and of Jones, both of whom have the same make of typewriters.

What is true of the device or object is also true of the process. The making of butter is a comparatively simple process. The separation of the milk from the cream, the ripening of the cream, the churning, the pressing, the salting, the coloring, all are essential operations. Furthermore, the nature and equipment of the particular dairy where you have seen the butter made may be an essential part of the exposition. These last two items are necessary parts of the generalized description of butter making because sanitation and the preservation of the public health are essential matters in the preparation of all foods. But suppose that, on a particular day, the ripening machine became too hot or was not hot

enough, and that the belt on the churn broke when the operation was only half completed, and that the foreman's finger was caught in the cogs and was so badly smashed that it had to be amputated, and that the dairy cat walked on the butter while the men were elsewhere, and the boy dumped too much salt and too much color into the batch that was being prepared. If you were to tell of all these things in your account of butter making, you would be losing sight of the essential part—in this case the way in which the butter is actually made—in a maze of interesting but nonessential matters. You would have a narrative rather than an exposition. Details of the sort suggested above are the life of narration and description but the death of exposition because the process that the writer seeks to set forth is lost in a wilderness of nonessential facts. Nothing has a place in an exposition that does not carry on and make clearer the matter under discussion.

The Process

Definition. Any attempt to make clear how something is done may be said to be the exposition of a process. Exposition of this type is usually narrative in its outward form: the various steps in the process are generally considered in their chronological order. In such expositions, too, descriptive passages frequently occur because it is often necessary in a process involving machinery

to explain the appearance of the machine itself or some of its parts.

The word "process" must not be understood to apply only to mechanical operations. "How Congress Enacts a Law," "How to Conduct a Class Meeting," "How to Investigate a Subject," "How to Write a Theme" are subjects for expositions of processes as truly as are topics like "How to Bake a Cake," "How to Make Sulphuric Acid," or "How to Make Butter."

Recipes and Directions. It is to be noted, however, that there is a distinction to be made between mere directions, or recipes, and expositions of processes. This distinction is a real one, even though it is difficult for the student to appreciate it. Too many essays that are labeled expositions of processes are merely sets of directions that tell what should be done under this set of conditions or under that. Pick up any laboratory manual or any cook book and the exact nature of directions or recipes will be apparent. Compare, for example, the following quotations.

DAHLIAS

Dahlias should be planted from late May to mid-June or after in order not to bloom during the summer heat.

Use a good, well-drained garden soil. If the soil is too rich or clayey, add sand or fine coal ashes. Plant 18″ to 3′ apart and 6″ deep, and lay the tubers flat with the eye looking up, not upright. Cover 2″ at first and fill in the rest gradually.

For the best flowers use only one or two sprouts to each

tuber. In dividing clumps be sure to leave a piece of the crown to each tuber. After four or five pairs of leaves have formed, pinch out the tops to make lateral growths and plants strong enough to stand without stakes. Cultivate all summer. Do not injure the lower leaves, as these shade the ground and protect the tubers. Fertilize with liquid manure or nitrate of soda when the first buds form.

Cut the flowers late in the evening when the dew is on them and keep in a cool place. If cut in the daytime put the stems in warm water. The small single flowers have become very popular for cutting, particularly the new anemone-flowered mignon types.

—*House Beautiful*

This passage, it is readily apparent, is a mere set of directions for doing a particular thing. It is exactly similar to the following short passage by John Ruskin.

ON SHADING

. . . . Before we trouble ourselves about differences in color, we must be able to lay on *one* color properly, in whatever gradations of depth and whatever shapes we want. We will try, therefore, first to lay on tints or patches of *grey*, of whatever depth we want, with a pointed instrument. Take any finely-pointed steel pen . . . . and a piece of quite smooth, but not shining, note paper, cream-laid, and get some ink that has stood already some time in the inkstand, so as to be quite black, and as thick as it can be without clogging the pen. Take a rule, and draw four straight lines, so as to enclose a square or nearly a square. . . . I say nearly a square, because it does not in the least

matter whether it is quite square or not, the object being merely to get a space enclosed by straight lines.

Now, try to fill in that square space with crossed lines, so completely and evenly that it shall look like a square patch of grey silk or cloth, cut out and laid on the white paper. . . . Cover it quickly, first with straightish lines, in any direction you like, not troubling yourself to draw them closely or neatly. Let them quite dry before retouching them. . . . Then cover these lines with others in a different direction, and let those dry; then in another direction still and let those dry. Always wait long enough to run no risk of blotting, and then draw the lines as quickly as you can. Each ought to be laid on as swiftly as the dash of the pen of a good writer; but if you try to reach this great speed at first, you will go over the edge of the square, which is a fault in this exercise. . . .

When you have gone over the whole square three or four times, you will find some parts of the square look darker than other parts. Now try to make the lighter parts as dark as the rest, so that the whole may be of equal depth of darkness.

—JOHN RUSKIN: *The Elements of Drawing*

Now compare these two extracts with those that follow. It requires only the most cursory examination to see the vast difference that exists between the two groups. The two extracts quoted above are directions pure and simple; those that follow are what are known as expositions of processes. There is something definitive about exposition; it gives one a sense of completeness. In recipes and directions there are only suggestions as to how the matter may be accomplished.

THE MANUFACTURE OF SUGAR IN CUBA *

In most parts of the island [Cuba] the harvesting season is six months long—from December to June; but in some sections the harvest lasts from the first of December to the first of October. The fields are so planted in the first place that each month of the grinding season produces its own crop of mature cane. Here is a group of fields where the new crop has just sprouted; over yonder another group where the cane is half grown; and on farther is a group where harvesting operations are in full swing.

In harvesting, the cane-cutters first strip the blades from the stalk; then they cut off the upper part of the latter, which is worthless except for replanting, since what juice it contains possesses very little sugar. One of the strange things about sugar cane is that the sap of the growing plant has little sugar, while in the mature stalk the juice is rich in sucrose. The action of the sun's rays seems to transform glucose into sucrose—a transformation that cannot be accomplished by human means. If man knew how to do that, every cornfield would be a sugar field.

The main body of the stalk is cut down and loaded into oxcarts. In these it is hauled to the field station and placed in the waiting cars. Each car contains about twenty tons and each train is made up of thirty cars. This makes six hundred tons of cane to the trainload, and eight to ten trainloads a day are required to keep one of the bigger centrals in operation for twenty-four hours. The big United Fruit Central, at Preston, requires the crop from two hundred and fifty acres every day to keep it busy. Imagine a field three fifths of a mile square being harvested between sunup and sundown to keep one central going!

* Reprinted by special permission of *The National Geographic Magazine.*

When the cane reaches the mill in the most modern plants, the cars are run, one by one, into a cradle and made fast thereto. A button is pressed and the cradle rocks over on one side. The side of the car swings loose and the load rolls out into a deep trench, at the bottom of which is an endless steel belt.

On this belt the cane is carried up to the crushing rolls. A man stands before a keyboard and by pressing the several electric buttons thereon regulates the flow through the crusher, which disrupts all the little sap cells and releases a great stream of foamy juice. Then the crushed cane is sent through sets of rollers, each time under heavy pressure.

Each set of rollers the cane passes through presses it harder than the one before. The last set may exert a pressure of a million pounds, and when the "bagasse," as the crushed cane is called, issues from them it is almost as dry as tinder. It is carried by conveyors to the fire boxes of the boilers, where it is used as fuel in generating the steam that drives the big mills and boils the cane juice. The stream of crushed cane flows through the last set of rolls at a speed of seven miles a day.

Imagine big gear wheels fourteen feet in diameter, with cogs sixteen inches long, three inches deep, and two inches thick on their face. Such are the trains of gears that transmit the power from the engines to the rolls.

After the juice is pressed out of the cane it is thoroughly strained and pumped into big tanks at the top of the building, where a milk-of-lime solution—in other words, plain whitewash—is added.

The mixture is then heated to a degree just above the boiling point. The lime neutralizes the acid in the juice and finds affinities in some of the foreign substances. It pulls these to the bottom and plays the same role of puri-

fier in the making of sugar that it plays in the making of iron. The heat causes the other impurities to rise to the surface as scum so that when the preliminary process is completed in the big settling tanks there is a top layer of froth, a middle layer of clear juice, and a bottom layer of mud-like solid material.

The clear juice is drawn off and passed through filters of excelsior. It is then pumped to the evaporators, where about half of the water is boiled out of it.

In the more modern factories there is a chain of four evaporators working together. We all learned in our school days that the lighter the air pressure, the lower the temperature at which liquids boil. The sugar manufacturer makes use of that principle in his factory. By means of air pumps he reduces the atmospheric pressure in each evaporator to a point below that of the preceding one.

The steam that boils the juice in the first evaporator must have a temperature of 215° Fahrenheit. When this steam falls below that temperature it passes into the coils of the second evaporator, where the air pressure is so reduced that the partially cooled steam makes the liquid boil at 203°. After it falls below that point the steam passes on to the third evaporator where, with a still further reduced air pressure, it is able to keep the syrup boiling until it falls below 180°. The fourth evaporator has the air pressure reduced to a practical vacuum. The steam that has lost so much of its heat as to be unable to maintain the boiling point in the third is nevertheless hot enough to keep the juice boiling in the fourth. Here only 150° of heat is needed to maintain the boiling process. By this arrangement the juice is boiled to the proper consistency with only one fourth of the heat otherwise required.

The next step in the making of sugar is to draw the thick juice into the vacuum pans. Here it comes into

contact with hot steam coils and boils at a very low temperature because of the absence of atmospheric pressure. As the boiling proceeds, the sugar crystallizes into small grains. The man in charge of a big vacuum pan is known as the sugar master. From time to time he adds fresh juice, and its sugar gradually settles on the crystals already formed, which thus are made to grow larger.

Finally the vacuum pan becomes full of sugar and mother syrup. The sugar and the adhering syrup are then removed to a centrifugal machine that acts somewhat on the principle of a cream separator. Placed inside a perforated basket and whirled around at from a thousand to fourteen hundred revolutions a minute, all of the syrup is forced out through the perforations, while the crystallized sugar remains behind.

This syrup is boiled again, after which it goes to the crystallizer, a huge revolving tank, in which a seed bed of crystals from the vacuum pan has been prepared. There it gradually deposits its sweetness on these crystals, and, when it has given up all that is worth waiting for, the mixture goes back to the centrifugal machine, where its adhering syrup is hurled out from the second lot of crystals. The process is repeated again, and by this time all the available sweetness has been extracted, and the remaining liquor is the "blackstrap" molasses of commerce.

—Quoted from "Cuba—The Sugar Mill of the Antilles." WILLIAM JOSEPH SHOWALTER: *The National Geographic Magazine*, July, 1920

Another brief exposition, used here as an aid to story-telling, is to be seen in the following selection:

RECARBURIZING

To recarburize means to put carbon back. You've got to do it in steel because sulphur and phosphorus are such

bull-headed impurities. By the time you've got that pair of poisons boiled out to the point where they no longer do harm, you've also burned up a lot of good stuff that you need in iron to make it steel—carbon, for one thing—which you must then put back. One way of doing this is to throw big bags of coke breeze directly into the steel ladle while the heat is being tapped into it from the furnace.

Watch Dan Tancovic now, out there on the little overhanging steel platform. The floor plates under Dan's feet are getting hot, for below him a ladle that holds a hundred and twenty tons of boiling inferno is three-quarters full. Beside Dan a white-hot stream as thick as Dan's leg squirts out of the tap hole. Down a fire-brick gutter hissing and flaming it goes, and off the end of that, leaping into the air—to drop with sparkle of burning steel drops, with horrible molten gurgle, into the ladle below. Dan Tancovic's clothes are asmoke. Dan's battered sou'wester is pulled down over his forehead. His lower face is tucked into the crook of his elbow. Only his eyes are exposed to the glare and the insufferable heat. On the hot floor at Dan's feet lie huge bags of coke. Coke is light—it takes a heap of coke to weigh anything. This very lack of weight makes it difficult for big Dan to handle.

"Now!" shouts the melter.

Dan stoops, grabs a bag, poises it over his shoulder, heaves it, and runs. Good thing that he runs. Dan's too strong. Dan has not the craft of defter, more lightly built men. Dan never can temper his strength to the deceptive lightness of those big bags of coke breeze. The bag lands on the boiling bath, out near the side. For the hundredth part of a second it floats, then leaps into the air, transformed to thousands of times its volume of gas, which ignites as it soars in a withering flame past

Dan's little gallery, lighting up every angle iron and column and rod and beam that make up the long steel house.

"Hey!" bellows Tim Mulaney. "Won't you ever learn that, you big hunk?"

Long Mark Kastriota steps up to the rail, his hat down like Dan's, his face tucked into the crook of his elbow. "Watch little bit, Dan," says Mark. "Not like dot"—Mark stoops, lifts, throws—"like dot!"

Mark does not run, only lowers his head and crooks his arm over his face again, peering down into the ladle. Through the veil of closed lashes Mark sees the bag hit the surface of that seething caldron fair and square where the stream of steel is plunging into the bath. With scarcely a flash of flame the coke is sucked down by the terrible vortex to where the oxygen of the air cannot get at it and the steel gets a chance to grab the carbon out of the coke.

"Like dot!" says Long Mark. "And dot! And dot! And dot!"

—R. G. Kirk: "Nemesis at Number Five." *Collier's Weekly*, September 13, 1924, p. 33

The following example is a purely technical one. It shows how desirable jobs can be accomplished at small expense and by making use of waste materials.

LOW COST OILING FOR MOSQUITO CONTROL*

For the past two years an economical method of oiling water surfaces has been used by the Health Department at Newport News, which has proven to be just as effective as the spray-can method with kerosene and crude oil.

*Used by special permission of *Water Works*.

The oil employed is a mixture of equal parts of kerosene and waste crank-case oil. This mixture seems to fulfill the requirements for a good larvacide. Iron drums of suitable sizes are left in all the large garages and the waste crank-case oil is put in these containers.

The garage owners are very glad to avail themselves of this means of disposing of their waste oil.

These drums, when full, are removed by the inspector of malaria control in a Ford truck and empty drums are left in their place. This collection is usually done on the return trip from work, on rainy days, or at other odd times and does not materially interfere with the regular work. During the winter the collection is continued by the same inspector, who is then employed by another department. The cost of this oil is, therefore, that of collection, which is very little.

Mixing the Oil and Sawdust. Sawdust is collected from a near-by mill and four or five barrels of it placed in a large vat, or oil-tight box, and the mixture of kerosene and crank-case oil is poured over the sawdust and allowed to stand for four or five days, or until it is throughly saturated with the oil. The oil-soaked sawdust is removed from one end of the vat while fresh sawdust and oil are added at the other end. Thus an abundant supply of oil-soaked sawdust is always available. The sawdust is put in barrels and placed at strategic points along the area to be oiled. From the barrels the sawdust is put into canvas bags that have been rendered oil-proof by five applications of Johnson's water-proofing. These bags are of convenient size and have a broad strap to be placed over the shoulder of the carrier much like the old-fashioned bookbag. The barrels are so placed that one bag full of sawdust will last until the next barrel is reached.

Application of Oil-Soaked Sawdust. This oil-soaked sawdust is sown broadcast on the water as a farmer sows grain. It sinks to the bottom immediately, and the oil is given off gradually for four or five days, thereby producing a continuous unbroken film of oil. Should the wind blow the film to one side for a while it will re-form from the oil which is constantly rising to the surface.

In every way this method of oiling has proven very satisfactory and far less expensive than the spray-can method.

Economies of the Method. This method of oiling is more economical than the spray-can method for the following reasons: A given area can be completely covered with at least one third less oil. One laborer can cover the same area that can be covered by two laborers with spray-cans because his load is smaller and less cumbersome. The film is more permanent and remains for at least three or four days longer than the film made by one application with the spray-can; consequently the oilings are farther apart and fewer in number during the season. A more complete film can be secured on water in which there is some vegetation as the sawdust will strike the leaves and roll down into the water while most of the oil from a spray-can will remain on the leaves. The transportation of barrels of oil-soaked sawdust is more convenient and less expensive than the transportation of barrels of oil as there is less weight and waste.

Many practical modifications of this method are possible, such as placing a box or bag, full of the oil-soaked sawdust at suitable places in a slowly flowing stream.

—Dr. C. B. Ransone: *Water Works*, January, 1925

If you were to go into an entirely different field of literature, and compare, for example, ordinary

stage directions with those given by such men as Sir J. M. Barrie, Mr. Bernard Shaw, and Mr. Granville Barker, you will appreciate the distinction between mere directions and expositions. Notice the following exposition of the exit of Mrs. Page in Barrie's one-act play, *Rosalind:*

(*Her face quivers a little, but she does not break down. She passes, a courageous figure, into the bedroom. The slippers plop as she mounts the steps to it. Her back looks older than we have seen it; at least such is its intention.*)

How different is this from what we ordinarily meet with in the matter of stage direction, "Exit Mrs. Page, to the bedroom, dejectedly."

EXERCISE

The following subjects are suggested as being suitable for themes dealing with processes. As has been the case elsewhere in these exercises, the list is meant to be only suggestive. Each student can, no doubt, add a great many other suitable subjects to those that are given. It is often desirable to have the class suggest other subjects before any definite assignment is made. In that way it will be possible for all to pick those processes with which they are familiar.

Making Pins
Making a Kite
Making Butter
Telephotography
How to Set a Stage
How to Coach a Play
How Shoes are Made
How to Build a Fire

How to Play ———
How Paper is Made
How to Paint a Wagon
Playing Quarter-Back
Running a Greenhouse
How to Pitch a Tent
How —— is Grown
How to Rig a Catboat
Logging
How to sell ———
Canning Peas
Sweeping a Room
Learning to Swim
Refining Petroleum
The Solvay Process
How to Paddle a Canoe
How to Conduct a Camp
How an Army is Mobilized
How to Drive an Automobile
How to Set up a Transit
How Good Roads are Built
Laying Concrete Walks
How to Make Maple Sugar
How Silver Plating is Done
Grafting Fruit Trees
How to Use a Logarithm Table
The Manufacture of Artificial Ice
How to Restore a Drowning Person

The Device

Definition. Expositions of devices include all attempts to make clear not only the form, appearance, and general make-up of machines and devices of all kinds but also the relationship of their parts. Such expositions almost invariably explain the principle upon which the machine is constructed and set forth the way in which it does its work. For example, the siphon is based on two principles: the weight of the atmosphere and the idea of capillarity, that property in liquids that causes their particles to cohere and drag the following particles after them. In the ordinary electric bell, the well-known electrical principle of the open and closed circuit, caused by the successive charging and discharging of the electric current, controls the spring that

operates the clapper of the bell. In discussing such apparatus, it is absolutely essential that the principles mentioned be explained and their relationship to the devices mentioned be made clear.

How Expositions of Devices are Written. Expositions of devices may be written in several ways. First we may consider the device in its entirety, tell what it looks like, and then explain its parts and its operation. This would ordinarily be the method employed in an exposition of a fountain pen. It approaches what has sometimes been called the deductive order in exposition.

In the next place, we may tell of the manner in which the device is constructed. For example, we may tell how a home-made fireless cooker is made in order that we may make clear the nature of the device rather than the process by which it was put together. This, of course, is merely another avenue of approach to the same result. It is the reverse of the method that has just been considered and may be said to employ the inductive order. Piece by piece the mechanism is described and, as its pieces are fitted together, their relationships are explained until the apparatus is complete.*

* If it be objected that this method should be called narrative and should be designated the exposition of a process rather than that of a device, it is to be remembered that the type of an exposition is determined not by external form but by the end that it is expected to serve. Here the intention is not to tell how the apparatus is made but rather to explain the principle of the cooker and the way it operates.

The following illustration will serve to make clear the nature of this type of exposition.

HOME-MADE AERATOR

Analyses made during the summer months showed that our raw water supply was devoid of dissolved oxygen. We have accounted for this by the fact that our intake pipe in the reservoir is submerged some 10 feet below the surface where the water is free from wind action and the sunlight never penetrates. Our new intake is arranged to take the water from the surface where there will be a maximum of agitation due to wind and plenty of sunlight. This, we think, will overcome, in a large measure, the deficiency of oxygen in the raw water, or at least analyses so indicate.

The absence of dissolved oxygen in the filtered water supply caused complaints from some of our consumers that the water smelt and tasted musty or spoilt, and from others that the fish in their aquariums were dying. To overcome these troubles we pumped air during the late spring, summer, and early fall months into the raw water section wells, effluent from filters and clear water reservoir. The results were only partially successful and very expensive; and in an effort to further improve these conditions we installed in the spring of 1923 an aerator on the discharge from our filters into the clear water basin. This aerator was made by means of turning the 30-inch effluent pipe upward bringing it to a point about 12 inches above the surface of the water in the clear water basin. On this outlet there was constructed an umbrella platform approximately twelve and a half feet in diameter. On the upper surface of this platform strips of wood or riffles were fastened, and below each riffle a line of holes was bored through the decking. All water entering the

clear basin flowed up through the center of this umbrella platform and thence over the surface and riffles, and finally a free fall of 15 inches into the clear water basin was obtained by lowering the flow line of the basin 6 inches.

The effect of the water passing over the riffles created a vacuum sucking air up through the small holes bored in the deck. The final result was that we obtained an average of approximately 60 per cent saturation in the filtered water under the most adverse conditions when the raw water contained no dissolved oxygen, and we were able to dispense with all other methods of aeration.

The result was so gratifying that it has been made a permanent feature of the operation, and there is no additional cost other than the first cost of installation as the heat lost in aeration was otherwise lost in friction.

—J. E. Gibson: *Water Works.* Annual Report of Commissioners of Public Works

The brief exposition of the de Forrest audion that follows illustrates the way in which a device may be explained by a simple setting forth of its principal characteristics.

THE DE FORREST AUDION

The de Forrest audion consists of three elements, a tantalum tungsten filament, a wire grid, and a metal plate mounted in the order named in a glass bulb from which practically all the air has been exhausted. The filament is heated to incandescence by an electric current. The alternating pressure which is to be amplified is impressed between the filament and the grid, and the circuit in which the amplification is to be produced is connected, in series with a battery, between the filament and the plate.

An amplification of fifty or more times may be produced by a single device of this kind, and the amplified electric pressure is an exact replica of that which is amplified.

—Harold Pender: *Recent Developments in Electrical Apparatus*

Sometimes it is desirable to explain popularly a rather intricate piece of mechanical apparatus. In such expositions many details are omitted. Mr. Hopkins' article which follows shows the way in which a complex device is made clear to ordinary laymen.

ELEVATORS WITH ELECTRIC BRAINS*

The "vertical" railway has been with us for many years, passing through various stages of evolution, from the slow-moving elevator operated by rope-pull to the high-speed, automatic, signal-control elevator, operated by pressing buttons in the car and hall. As buildings grew in size, greater and greater demands were made upon the elevator builder. Land values have increased enormously in later years and increased land values mean higher buildings, and higher buildings mean more space taken by the elevators in order to serve the transportation requirements of the building. This presents a very serious problem to the architect, as the building must have a large percentage of rentable space in order to make it profitable to its owners. Therefore it is necessary to "speed up" and get the highest possible service out of each elevator, to reduce to a minimum the number of elevators required.

Until a few years ago a speed of six hundred feet per minute was an exception, but today, speeds of eight hun-

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dred feet per minute or more are perfectly practicable due to marked improvements in elevator control.

The Otis Elevator Company has recently brought out two signal advances, the micro-drive self-leveling elevator, and the automatic signal control. These two inventions have made possible the automatic electric elevator we describe.

Jockeying Automatically Eliminated

Due to the high speeds previously noted it is very important to provide an efficient and reliable safety device capable of stopping a fully loaded car. This device is located under the car and is connected to a speed governor located at the top of the shaft. In case the car attains excessive descending speed, the governor is tripped and grips the governor cable, causing a drum which is mounted in the safety frame to revolve, which in turn operates right- and left-hand screws, forcing wedges between the guide clamps and causing heavy steel jaws to grip the guide rails, bringing the car to a smooth and gradual stop.

Probably you have often wondered why the elevator car as it approaches the terminal landings, gradually slows down without any action on the part of the operator. This is accomplished by the automatic "slow-down" of the motor which is controlled by a multiple contact switch on top of the car, which switch is gradually actuated by curved cams located at top and bottom of the shaft. Oil buffers are also provided to bring the car to a gradual and positive stop at the extreme limits of travel beyond the terminal landings, should the car run past for any reason.

Now, consider the new devices which have done so much to speed up elevator service, and which also make for safety. For years we have been told that the elevator

is under the control of the operator at all times. Now we reverse this and can truthfully say that the elevator is under the control of a machine at all times, and a very clever machine it is, too.

The "micro-drive" differs from the ordinary method of operation in that it always automatically brings the car level to the landing, and maintains it there entirely independently of the operator. It not only entirely eliminates the tripping hazard but also saves time and power, as the operator is not required to "jockey" or "inch" to make a landing. This drive is very advantageous for all passenger elevators but it is practically indispensable for express passenger service, as well as for freight and hospital elevators.

This machine is usually equipped with two motors instead of one, the leveling motor having only about one tenth the horse power of the main motor. There are two brakes, one for stopping the leveling-motor and one for stopping the main motor. The second brake also serves as a friction clutch to connect the micro-drive to the hoisting drive. Both motors are mounted together as a unit on a bedplate. The leveling-switch on the car may be considered the car switch and the leveling-cams at each floor may be considered as the operator. While the car is being run by the main motor, the leveling-switch operating-rollers are pulled out of reach, and will pass clear of the hatchway leveling-cams. However, while the elevator car is slowing down, on approaching a designated landing, and is in the micro-zone, the leveling-switch is automatically released to engage the leveling-cams. The entire mechanism works so rapidly and smoothly that the passengers in the car do not realize what is being done for their comfort, convenience, and safety.

The second interesting feature is the automatic signal

control. This system has been designed especially for automatic control of high-speed elevators, thus saving time, and giving smoother operation and absolute obedience to signals. Signal control may be used for any number of elevators, and the name "signal control" is given because the waiting passengers at a landing actually stop the car, instead of signaling the operator to do so. All that the operator is required to do is to initiate the starting of the car, and to act as a guard, similar to the guard on the subway train; even the doors being arranged to open and close automatically without any effort on his part.

At each intermediate floor there are two stopping buttons controlling all cars, one for the "up" direction and one for the "down." There is also provided at each intermediate floor an "up" and "down" signal lamp for each car. A car is stopped at a floor by the waiting passenger pressing a button at that floor, or by the operator pressing buttons in the car-operating box, as floors are called for by passengers in the car. When the operator receives a signal from the dispatcher to start the car, he moves a small switch handle which causes the power-operated car gate and shaft door to close. The instant they are closed, the car automatically starts and proceeds on its journey, until it approaches the first landing for which a button has been pressed, either in the car or at the landing, when it automatically slows down and stops level with the landing. The car gate and shaft door open automatically while the car is leveling. After passengers leave or enter the car, the operator again moves the small switch handle, causing the gate and door to close, and starting the car. The car will automatically stop in proper sequence at all floors for which the car buttons have been pressed, regardless of the numerical order in which they were pressed.

Dummy Car Does all the Work

The selector is positively driven from the car by a steel tape, through reduction gearing, causing the movable contacts on the selector to travel accurately in a direction corresponding to the car, but at a very much slower speed. The stops of an elevator are controlled by its individual selector. The stops registered from within the car are controlled by the car-operating buttons, in conjunction with the selector. The pressing of the hall buttons are registered by the magnetic relays on the master panel, which automatically distributes and transmits the calls to the various selectors. The selector of the nearest car approaching a particular landing will cause that car to stop at that landing.

These contacts at each floor-position are engaged by traveling brushes carried by the crosshead. These brushes and contacts work through magnets and relays, thus initiating the stopping and starting of the car. The latching magnets on the master relay panel in conjunction with the selector bring about the automatic stopping at the floor.

To go into the intricacies of the connections would take us too far afield. What it is desired to explain is the broad fact that the steel tape runs a miniature substitute up and down the selector-frame and this dummy car does all the work, transmitting its orders through the relay and panel boards to the micro-motor and keeps up the flashing of the lights at the signals on the floors where elevator service is required.

With signal control, after a passenger has pressed a hall button, the nearest available car will always respond to the call, which everyone knows is not always the case with the old-fashioned method of signaling to the operator in the car. Such stopping is dependent upon the whim

of the operator or the knowledge that the signal has been given.

—Albert A. Hopkins: *The Scientific American*, October, 1925

Another brief example of the exposition of a device is reprinted from the magazine of *Beta Theta Pi*. It is an exposition of a device invented by one of the members of that organization, Herbert G. Dorsey.

THE FATHOMETER

In the fathometer, a development of the Research Laboratory of the Submarine Signal Corporation of Boston, a sound is produced in the water under the ship which goes to the bottom of the ocean and its return or echo is indicated on a rotating dial opposite a scale calibrated in fathoms. Since sound travels about four and one half times as fast in water as in air, or eight hundred fathoms a second, and since the sound has to go down and back through the water, it travels through a depth of four hundred fathoms in one second or one fathom in one four-hundredth of a second. This time interval is about eighty times smaller than can be measured by the ordinary stop watch, so that it was necessary to devise a special method of measuring such short time intervals. This is accomplished in the fathometer, by having a disc rotating four times per second back of a transparent scale divided into one hundred parts so that each division represents one four-hundredth of a second, or one fathom. The instantaneous flash of a light on the disc when the echo returns makes the method entirely automatic and visual, requiring no calculations or adjustments and giving readings as fast as two hundred and forty per minute. Thus a navigator knows the exact shape of the bottom he

is going over, permitting him not only to tell how much water he is in, but, by following the charts, he can tell what part of the coast he is on, even at midnight in the densest fog.

As in the case of the process, a warning is necessary. There is a difference between the reading of a diagram or a blue print of a mechanical contrivance and an exposition of that contrivance. Diagrams and blue prints are in reality illustrations to aid the understanding. When one substitutes the reading of the diagram for an exposition that depends for its being understood on clarity of phrasing, coherence of structure, and adequacy of diction, he has failed to appreciate the value and the demands of the expository form. Note the difference between the following example and those that immediately precede this paragraph as illustrative of this point.

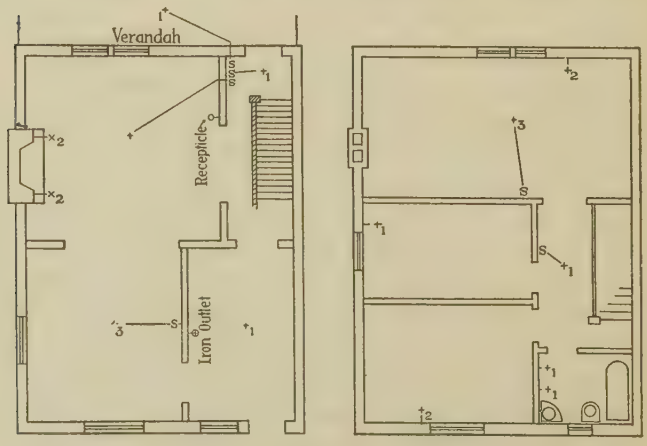

FIG. 20.

Wiring Plan. It is desirable that a plan of the proposed distribution of openings be made. Fig. 20 shows such a plan for a two-story dwelling. The numerals represent the number of lights to be installed in a pendent fixture if in the center of the room or upon wall brackets if shown as coming out from the wall. The letter "S" stands for a switch, usually of the single pole variety; the word "Receptacle" for a plug socket to which an extension cord may be attached, at pleasure, as for a portable lamp stand; and "Iron Outlet" for the point where a flat iron may be attached to the circuit by "plugging in."

—*Pennsylvania Giant Power Survey Report*, p. 271

EXERCISE

Each member of the class should hand in a list of at least ten subjects, different from those included in the following list, each of which should be capable of being expanded into a four-hundred-word theme. Let the class then examine the lists and determine first whether they are all "device" subjects. Then allow each student to select that subject in which he is most interested and prepare an outline of the material he intends to use. After the outline has been approved, the theme should be prepared.

The Baby Tank
The Thermostat
The Slide Rule
The Mine Helmet
A Shrapnel Shell
The Very Pistol
A Graflex Camera
A Coffee Percolator
A Model Barn
The Air Brake
A Milking Machine
The Hydraulic Press
Structure of the Eye
The Bunsen Burner
The Maxim Silencer
The Talking Machine

The Machine Lathe	The Whitehead Torpedo
A Compass	The Vapor Heating System
The Barometer	The Motion-Picture Machine
The Pulmotor	The Hand Fire Extinguisher
The Telephone	The Electric Arc Light

An Electric Washing Machine

Generalized Narratives and Descriptions

Many subjects, not processes or devices, lend themselves best to narrative or descriptive treatment when they are explained. Many such descriptions are to be found in volumes of a scientific character or in books whose main object is to give a generalized picture or account of some matter of interest. The generalized description of a flower, an animal, a race of people, or a type of architecture is exposition. The growth or development of any one of these matters mentioned in the last sentence although it is put in a narrative order becomes a generalized life history of that thing and consequently an exposition. Similarly, student life may be made clear by narrating the happenings in the life of a typical student. For want of a better designation such expositions have been called generalized narratives and descriptions or expository narratives and descriptions.

The following selections illustrate various types of these generalized treatments of subject matter.

THE TORTOISE

While I was in Sussex last autumn, my residence was at the village near Lewes, from whence I had formerly the

pleasure of writing to you. On the 1st of November I remarked that the old tortoise, formerly mentioned, began first to dig the ground, in order to the forming its hibernaculum, which it had fixed on just beside a great tuft of hepaticas. It scrapes out the ground with its forefeet, and throws it up over its back with its hind; but the motion of its legs is ridiculously slow, little exceeding the hour hand of a clock, and suitable to the composure of such an animal. Nothing can be more assiduous than this creature, night and day, in scooping the earth, and forcing its great body into the cavity; but, as the noons of that season proved unusually warm and sunny, it was continually interrupted, and called forth by the heat, in the middle of the day; and though I continued there till the 13th of November, yet the work remained unfinished. Harsher weather, and frosty mornings, would have quickened its operations. No part of its behavior ever struck me more than the extreme timidity it always expresses with regard to rain; for though it has a shell that would secure it against the wheel of a loaded cart, yet does it discover as much solicitude about rain as a lady dressed in all her best attire, shuffling away on the first sprinklings, and running its head up in a corner. If attended to, it becomes an excellent weatherglass: for as sure as it walks elate, and, as it were, on tiptoe, feeding with great earnestness in a morning, so sure will it rain before night. It is totally a diurnal animal, and never pretends to stir after it becomes dark. The tortoise, like other reptiles, has an arbitrary stomach, as well as lungs; and can refrain from eating as well as breathing for a great part of the year. When first awakened, it eats nothing; nor again in the autumn, before it retires: through the height of the summer it feeds voraciously, devouring all the food that comes in its way. I was much taken with its sagacity in discerning those that do it kind offices; for, as soon as the

good old lady comes in sight who has waited on it for more than thirty years, it hobbles toward its benefactress with awkward alacrity, but remains inattentive to strangers. Thus not only "the ox knoweth his owner, and the ass his master's crib," but the most abject reptile and torpid of beings distinguishes the hand that feeds it, and is touched with the feelings of gratitude!

P. S.—In about three days after I left Sussex the tortoise retired into the ground under the hepatica.

—Gilbert White: *Natural History of Selborne*

THE SLOTH

Let us now turn our attention to the Sloth, whose native haunts have hitherto been so little known, and probably little looked into. Those who have written on this singular animal have remarked that he is in a perpetual state of pain, that he is proverbially slow in his movements, that he is a prisoner in space, and that as soon as he has consumed all the leaves of the tree upon which he has mounted, he rolls himself up in the form of a ball and then falls to the ground. This is not the case.

If the naturalists who have written the history of the sloth had gone into the wilds, in order to examine his haunts and economy, they would have learned that, though all other quadrupeds may be described while resting upon the ground, the sloth is an exception to this rule, and that his history must be written while he is in the tree.

This singular animal is destined by nature to be produced, to live and to die in the trees; and to do justice to him, naturalists must examine him in this upper element. He is a scarce and solitary animal and, being good food, he is never allowed to escape. He inhabits remote and gloomy forests, where snakes take up their abode, and

where cruelly stinging ants and scorpions, and swamps, and innumerable thorny shrubs and bushes, obstruct the steps of civilized man. Were you to draw your own conclusions from the descriptions which have been given of the sloth, you would probably suspect that no naturalist has actually gone into the wilds with the fixed determination to find him out and examine his haunts, and see whether nature has committed any blunder in the formation of this extraordinary creature, which appears to us so forlorn and miserable, so ill put together, and so totally unfit to enjoy the blessings which have been so bountifully given to the rest of animated nature; for, as it has formerly been remarked, he has no soles to his feet, and he is evidently ill at ease when he tries to move on the ground, and it is then that he looks up in your face with a countenance that says, "Have pity on me, for I am in pain and sorrow."

It mostly happens that Indians and Negroes are the people who catch the sloth and bring it to the white man; hence it may be conjectured that the erroneous accounts we have hitherto had of the sloth have not been penned down with the slightest intention to mislead the reader or give him an exaggerated history, but that these errors have naturally arisen by examining the sloth in those places where nature never intended that he should be exhibited.

However, we are now in his own domain. Man but little frequents these thick and noble forests, which extend far and wide on every side of us. This, then, is the proper place to go in quest of the sloth. We will first take a near view of him. By obtaining a knowledge of his anatomy, we shall be enabled to account for his movements hereafter, when we see him in his proper haunts. His forelegs, or, more correctly speaking, his arms, are apparently much too long, while his hind legs are very short and look

as if they could be bent almost to the shape of a corkscrew. Both the fore and hind legs, by their form and by the manner in which they are joined to the body, are quite incapacitated from acting in a perpendicular direction or in supporting it on the earth, as the bodies of other quadrupeds are supported, by their legs. Hence, when you place him on the floor, his belly touches the ground. Now, granted that he supported himself on his legs like other animals, nevertheless he would be in pain, for he has no soles to his feet, and his claws are very sharp and long and curved; so that, were his body supported by his feet, it would be by their extremities, just as your body would be were you to throw yourself on all fours and try to support it on the ends of your toes and fingers—a trying position. Were the floor of glass or of a polished surface, the sloth would actually be quite stationary; but as the ground is generally rough, with little protuberances upon it, such as stones, or roots of grass, etc., this just suits the sloth and he moves his forelegs in all directions, in order to find something to lay hold of; and when he has succeeded, he pulls himself forward and is thus enabled to travel onward, but at the same time in so tardy and awkward a manner as to acquire him the name of Sloth.

Indeed his looks and his gestures evidently betray his uncomfortable situation; and as a sigh every now and then escapes him, we may be entitled to conclude that he is actually in pain.

Some years ago I kept a sloth in my room for several months. I often took him out of the house and placed him upon the ground, in order to have an opportunity of observing his motions. If the ground were rough, he would pull himself forward, by means of his forelegs, at a pretty good pace; and he invariably immediately shaped his course toward the nearest tree. But if I put

him upon a smooth and well-trodden part of the road, he appeared to be in trouble and distress: his favorite abode was the back of a chair; and after getting all his legs in a line upon the topmost part of it, he would hang there for hours together and often, with a low and inward cry, would seem to invite me to take notice of him.

The sloth, in its wild state, spends its whole life in trees and never leaves them but through force, or by accident. An all-ruling Providence has ordered man to tread on the surface of the earth, the eagle to soar in the expanse of the skies, and the monkeys and squirrels to inhabit the trees; still these may change their relative situations without feeling much inconvenience: but the sloth is doomed to spend his whole life in the trees, and, what is more extraordinary, not upon the branches, like the squirrel and the monkey, but under them. He moves suspended from the branch, he rests suspended from it, and he sleeps suspended from it. To enable him to do this, he must have a very different formation from that of any other known quadruped.

Hence, his seemingly bungled conformation is at once accounted for; and in lieu of the sloth's leading a painful life, and entailing a melancholy and miserable existence on its progeny, it is but fair to surmise that it enjoys life as much as any other animal, and that its extraordinary formation and singular habits are but further proofs to engage us to admire the wonderful works of Omnipotence.

It must be observed that the sloth does not hang head downwards like the vampire. When asleep, he supports himself from a branch parallel to the earth. He first seizes the branch with one arm and then with the other; and after that, brings up both his legs, one by one, to the same branch; so that all four are in a line: he seems perfectly at rest in this position. Now, had he a tail, he would

become the sport of the winds. Thus his deficiency of tail, scarcely exceeding an inch and a half in length.

I observed, when he was climbing, he never used his arms both together, but first one and then the other, and so on alternately. There is a singularity in his hair, different from that of all other animals, and, I believe, hitherto unnoticed by naturalists; his hair is thick and coarse at the extremity, and gradually tapers to the root, where it becomes fine as a spider's web. His fur has so much the hue of the moss which grows on the branches of the trees that it is very difficult to make him out when he is at rest.

The male of the three-toed sloth has a longitudinal bar of very fine black hair on his back, rather lower than the shoulder-blades; on each side of this black bar there is a space of yellow hair, equally fine; it has the appearance of being pressed into the body and looks exactly as if it had been singed. If we examine the anatomy of his forelegs, we shall immediately perceive, by their firm and muscular texture, how very capable they are of supporting the pendent weight of his body, both in climbing and at rest; and, instead of pronouncing them a bungled composition, as a celebrated naturalist has done, we shall consider them as remarkably well calculated to perform their extraordinary functions.

As the sloth is an inhabitant of forests within the tropics, where the trees touch each other in the greatest profusion, there seems to be no reason why he should confine himself to one tree alone for food and entirely strip it of its leaves. During the many years I have ranged the forests, I have never seen a tree in such a state of nudity; indeed, I would hazard a conjecture, that, by the time the animal had finished the last of the old leaves, there would be a new crop on the part of the tree he had stripped

first, ready for him to begin again, so quick is the process of vegetation in these countries.

There is a saying among the Indians that when the wind blows the sloth begins to travel. In calm weather he remains tranquil, probably not liking to cling to the brittle extremity of the branches, lest they should break with him in passing from one tree to another; but as soon as the wind rises, the branches of the neighboring trees become interwoven, and then the sloth seizes hold of them and pursues his journey in safety. There is seldom an entire day of calm in these forests. The trade wind generally sets in about ten o'clock in the morning, and thus the sloth may set off after breakfast and get a considerable way before dinner. He travels at a good round pace; and were you to see him pass from tree to tree, as I have done, you would never think of calling him a sloth.

Thus, it would appear that the different histories we have of this quadruped are erroneous on two accounts: first, that the writers of them, deterred by difficulties and local annoyances, have not paid sufficient attention to him in his native haunts; and secondly, they have described him in a situation in which he was never intended by nature to cut a figure—I mean on the ground. The sloth is as much at a loss to proceed on his journey upon a smooth and level floor as a man would be who had to walk a mile in stilts upon a line of feather beds.

One day, as we were crossing the Essequibo, I saw a large two-toed sloth on the ground upon the bank; how he had got there nobody could tell. The Indian said he had never surprised a sloth in such a situation before: he would hardly have come there to drink, for both above and below the place the branches of the trees touched the water and afforded him an easy and safe access to it. Be this as it may, though the trees were not above twenty yards from him, he could not make his way through the

same in time enough to escape before we landed. As soon as we got up to him, he threw himself upon his back and defended himself in gallant style with his forelegs. "Come, poor fellow," said I to him, "if thou hast got into a hobble today, thou shalt not suffer for it: I'll take no advantage of thee in misfortune; the forest is large enough both for thee and me to rove in: go thy ways up above, and enjoy thyself in these endless wilds; it is more than probable thou wilt never have another interview with man. So fare thee well."

On saying this, I took a long stick which was lying there, held it for him to hook on, and then conveyed him to a high and stately mora. He ascended with wonderful rapidity, and in about a minute he was almost at the top of the tree. He now went off in a side direction and caught hold of the branch of a neighboring tree; he then proceeded toward the heart of the forest. I stood looking on, lost in amazement at his singular mode of progress. I followed him with my eye till the intervening branches closed in betwixt us; and then I lost sight forever of the two-toed sloth. I was going to add that I never saw a sloth take to his heels in such earnest; but the expression will not do, for the sloth has no heels.

That which naturalists have advanced of his being so tenacious of life is perfectly true. I saw the heart of one beat for half an hour after it was taken out of the body. The wourali poison seems to be the only thing that will kill it quickly. On reference to a former part of these wanderings, it will be seen that a poisoned arrow killed the sloth in about ten minutes.

So much for this harmless, unoffending animal. He holds a conspicuous place in the catalogue of the animals of the new world. Though naturalists have made no mention of what follows, still it is not less true on that account. The sloth is the only quadruped known which

spends its whole life from the branch of a tree, suspended by his feet. I have paid uncommon attention to him in his native haunts. The monkey and squirrel will seize a branch with their forefeet, and pull themselves up, and rest or run upon it; but the sloth, after seizing it, still remains suspended and, suspended, moves along under the branch, till he can lay hold of another. Whenever I have seen him in his native woods, whether at rest, or asleep, or on his travels, I have always observed that he was suspended from the branch of a tree. When his form and anatomy are attentively considered, it will appear evident that the sloth cannot be at ease in any situation where his body is higher or above his feet. We will now take our leave of him.

—Charles Warterton: *Wanderings in South America*

LONDON IN 1685

He who then rambled to what is now the gayest and most crowded part of Regent Street found himself in a solitude, and was sometimes so fortunate as to have a shot at a woodcock. On the north the Oxford road ran between hedges. Three or four hundred yards to the south were the garden walls of a few great houses which were considered as quite out of town. On the west was a meadow renowned for a spring from which, long afterward, Conduit Street was named. On the east was a field not to be passed without a shudder by any Londoner of that age. There, as in a place far from the haunts of men, had been dug, twenty years before, when the great plague was raging, a pit into which the dead carts had nightly shot corpses by scores. It was popularly believed that the earth was deeply tainted with infection and could not be disturbed without imminent risk to human life. No foundations were laid there till two generations had

passed without any return of the pestilence, and till the ghastly spot had long been surrounded by buildings.

We should greatly err if we were to suppose that any of the streets and squares then bore the same aspect as at present. The great majority of the houses, indeed, have, since that time, been wholly, or in great part, rebuilt. If the most fashionable parts of the capital could be placed before us, such as they then were, we should be disgusted by their squalid appearance, and poisoned by their noisome atmosphere. In Covent Garden a filthy and noisy market was held close to the dwellings of the great. Fruit women screamed, carters fought, cabbage stalks and rotten apples accumulated in heaps at the thresholds of the Countess of Berkshire and of the Bishop of Durham.

The center of Lincoln's Inn Fields was an open space where the rabble congregated every evening, within a few yards of Cardigan House and Winchester House, to hear mountebanks harangue, to see bears dance, and to set dogs at oxen. Rubbish was shot in every part of the area. Horses were exercised there. The beggars were as noisy and importunate as in the worst governed cities of the Continent. A Lincoln's Inn mumper was a proverb. The whole fraternity knew the arms and liveries of every charitably disposed grandee in the neighborhood and, as soon as his lordship's coach and six appeared, came hopping and crawling in crowds to persecute him. These disorders lasted, in spite of many accidents, and of some legal proceedings, till, in the reign of George II, Sir Joseph Jekyll, Master of the Rolls, was knocked down and nearly killed in the middle of the square. Then at length palisades were set up, and a pleasant garden laid out.

St. James's Square was a receptacle for all the offal and cinders, for all the dead cats and dead dogs of Westminster. At one time a cudgel player kept the ring there. At another time an impudent squatter settled himself there,

and built a shed for rubbish under the windows of the gilded saloons in which the first magnates of the realm, Norfolk, Ormond, Kent, and Pembroke, gave banquets and balls. It was not till these nuisances had lasted through a whole generation, and till much had been written about them, that the inhabitants applied to Parliament for permission to put up rails, and to plant trees.

When such was the state of the region inhabited by the most luxurious portion of society, we may easily believe that the great body of the population suffered what would now be considered as insupportable grievances. The pavement was detestable; all foreigners cried shame upon it. The drainage was so bad that in rainy weather the gutters soon became torrents. Several facetious poets have commemorated the fury with which these black rivulets roared down Snow Hill, and Ludgate Hill, bearing to Fleet Ditch a vast tribute of animal and vegetable filth from the stalls of butchers and green-grocers. This flood was profusely thrown to right and left by coaches and carts. To keep as far from the carriage road as possible was therefore the wish of every pedestrian. The mild and timid gave the wall. The bold and athletic took it. If two roisterers met, they cocked their hats in each other's faces, and pushed each other about till the weaker was shoved toward the kennel. If he was a mere bully he sneaked off, muttering that he should find a time. If he was pugnacious, the encounter probably ended in a duel behind Montague House.

The houses were not numbered. There would indeed have been little advantage in numbering them; for of the coachmen, chairmen, porters, and errand boys of London, a very small proportion could read. It was necessary to use marks which the most ignorant could understand. The shops were therefore distinguished by painted signs, which gave a gay and grotesque aspect to the streets.

The walk from Charing Cross to Whitechapel lay through an endless succession of Saracens' Heads, Royal Oaks, Blue Bears, and Golden Lambs, which disappeared when they were no longer required for the direction of the common people.

When the evening closed in, the difficulty and danger of walking about London became serious indeed. The garret windows were opened, and pails were emptied, with little regard to those who were passing below. Falls, bruises, and broken bones were of constant occurrence. For, till the last year of the reign of Charles II, most of the streets were left in profound darkness. Thieves and robbers plied their trade with impunity; yet they were hardly so terrible to peaceable citizens as another class of ruffians. It was a favorite amusement of dissolute young gentlemen to swagger by night about the town, breaking windows, upsetting sedans, beating quiet men, and offering rude caresses to pretty women. Several dynasties of these tyrants had, since the Restoration, domineered over the streets. The Muns and Tityre Tus had given place to the Hectors, and the Hectors had been recently succeeded by the Scourers. At a later period arose the Nicker, the Hawcubite, and the yet more dreaded name of Mohawk.

The machinery for keeping the peace was utterly contemptible. There was an act of Common Council which provided that more than a thousand watchmen should be constantly on the alert in the city, from sunset to sunrise, and that every inhabitant should take his turn of duty. But this act was negligently executed. Few of those who were summoned left their homes; and those few generally found it more agreeable to tipple in alehouses than to pace the streets.

It ought to be noticed that, in the last year of the reign of Charles II, began a great change in the police of London,

a change which has perhaps added as much to the happiness of the body of the people as revolutions of much greater fame. An ingenious projector, named Edward Heming, obtained letters patent conveying to him, for a term of years, the exclusive right of lighting up London. He undertook, for a moderate consideration, to place a light before every tenth door, on moonless nights, from Michaelmas to Lady Day, and from six to twelve of the clock. Those who now see the capital all the year round, from dusk to dawn, blazing with a splendor beside which the illuminations for La Hogue and Blenheim would have looked pale, may perhaps smile to think of Heming's lanterns, which glimmered feebly before one house in ten during a small part of one night in three. But such was not the feeling of his contemporaries. His scheme was enthusiastically applauded, and furiously attacked. The friends of improvement extolled him as the greatest of all the benefactors of his city. What, they asked, were the boasted inventions of Archimedes when compared with the achievement of the man who had turned the nocturnal shades into noonday? In spite of these eloquent eulogies the cause of darkness was not left undefended. There were fools in that age who opposed the introduction of what was called the new light as strenuously as fools in our age have opposed the introduction of vaccination and railroads, as strenuously as the fools of an age anterior to the dawn of history doubtless opposed the introduction of the plough and of alphabetical writing. Many years after the date of Heming's patent there were extensive districts in which no lamp was seen.

We may easily imagine what, in such times, must have been the state of the quarters of London which were peopled by the outcasts of society. Among those quarters one had attained a scandalous preëminence. On the confines of the City and the Temple had been founded,

in the thirteenth century, a House of Carmelite Friars, distinguished by their white hoods. The precinct of this house had, before the Reformation, been a sanctuary for criminals and still retained the privilege of protecting debtors from arrest. Insolvents consequently were to be found in every dwelling, from cellar to garret. Of these a large proportion were knaves and libertines, and were followed to their asylum by women more abandoned than themselves. The civil power was unable to keep order in a district swarming with such inhabitants; and thus Whitefriars became the favorite resort of all who wished to be emancipated from the restraints of the law. Though the immunities legally belonging to the place extended only to cases of debt, cheats, false witnesses, forgers, and highwaymen found refuge there. For amidst a rabble so desperate no peace officer's life was in safety. At the cry of "Rescue" bullies with swords and cudgels, and termagant hags with spits and broomsticks, poured forth by hundreds; and the intruder was fortunate if he escaped back into Fleet Street, hustled, stripped, and pumped upon. Even the warrant of the Chief Justice of England could not be executed without the help of a company of musketeers. Such relics of the barbarism of the darkest ages were to be found within a short walk of the chambers where Somers was studying history and law, of the chapel where Tillotson was preaching, of the coffee house where Dryden was passing judgment on poems and plays, and of the hall where the Royal Society was examining the astronomical system of Isaac Newton.

—Thomas Babington Macaulay: *History of England*

EXERCISE

The following subjects, although they are not strictly expositions of processes or devices, lend

themselves to the narrative or the descriptive exposition form. In many instances this type of subject provides the popular method of conveying information that would otherwise prove to be highly technical or rather involved and somewhat dry.

NARRATIVE SUBJECTS

A Sunday at ——
A Roman Banquet
Habits of Ants
The Life of a Freshman
Life on an Ocean Steamer
The Life Story of a Cent
Life Aboard a Transport
A New England Town Meeting
A Legislative Assembly at Work
A Day in the Life of a Raw Recruit
The Life Story of Any Live Thing
The Life Story of a Meadow Mouse
Theaters and Theatrical Performances
A Day with a Reporter on a Large Daily Paper

DESCRIPTIVE SUBJECTS

A Bank
The Frog
Microbes
The Robin
The Circus
The Oyster
The Mushroom
American Children
A Country Sunday
A Theater Audience
The Cliff Dwellers
The Football Man
A Colonial House
The Village Loafer
A Typical Collegian
The Flying Squirrel
The Two-Cent Newspaper
The Crowd and the Soap-Box Orator
Social Life in a College Town
The Construction of Ancient Theaters

It is to be remembered that all of the subjects here suggested must be treated in such a manner as

to convey the impression that an individual instance is not being recorded but that the description or the narrative is a generalized account of the subject.

Scientific Exposition—The Treatise

Definition. Frequently a long and exhaustive treatment of a subject that is highly technical, scientific, or theoretical in character is undertaken. Such a production may involve many expositions, each one of which may appear more or less complete in itself and yet all of them be parts of the subject in its entirety. A volume which is the sum of such expositions is usually called a *treatise*. So we have treatises on Diseases of the Skin, where a great number of different affections of the skin are explained and their treatment is suggested. We have, too, treatises on Physiological Chemistry, on American Fungi, on Ballistics, and the like.

Nature of Treatises. Each of these long dissertations, as well as all of its parts, should exemplify the principles that underlie expository writing. Scientific writing in order to be convincing must make readily apparent the fact that the material treated is not individual but general and that the conclusions have been drawn from a rather extensive examination of many phenomena, examples, or specimens. It must be plain that the result or principle announced has to do with the essential constituents of the idea or notion; and that, from a

careful comparison of the ideas and facts presented and discovered, certain principles or laws have been disclosed that are common to the entire genus or notion.

It will be readily perceived that a textbook like the present one cannot provide an example of this sort of technical exposition except in so far as it is itself such an example. An examination of the various parts of this volume will disclose that each section is an explanation of some type of expository writing, and that the whole volume is a somewhat complete discussion of the whole subject of exposition. In no case has a generalization been made from one or two instances; and, in all cases, care has been taken to state as principles only those laws of exposition that can be justified by a careful examination of the body of expository literature.

It would be well for the student to examine with some care a volume of a scientific character in order that he may see how great a number of expositions of all sorts, dealing with various phases of the subject under consideration, may be gathered together and so correlated that they make a complete whole and set forth fully the various matters that the vastly more complex subject gives rise to.

EXERCISE

Select a text of a scientific or philosophical nature; examine its table of contents; read with care some

one part of the book to see how complete that part may be and yet be a part of a larger subject; and finally notice how the whole book depends for its value on the way this seemingly complete part fits into the scheme of the whole book.

CHAPER VII

Expositions of Facts and Ideas

In magazine literature, especially, there is a vast number of articles that are concerned with discussions of modes of action, with principles of conduct, and with the backgrounds or the explanations of facts and ideas. The discussions fall into no set category; and, perhaps, it is better that they should not do so. Their prevalence, however, demands that they be noticed even if that notice be only a brief one.

Sometimes this type of essay is exceedingly discursive. The author has caught hold of an idea, and he sets out to make it clear to others while he is clearing it up in his own mind. He has no set plan for his essay; he allows it to take him where it will. As he writes, he is succeeding in building up an explanation of his idea.

At other times, the discussion of the fact or principle is very logical and exact. Here every phase of the principle is built firmly into the structure until, at the end of the essay, we are forced to acknowledge a complete understanding of the subject under consideration. Sometimes the principle discussed is a law of nature; sometimes it

is a law of conduct or a moral principle; and sometimes it is the common acceptation of a legal principle. Whatever it is, the duty of the writer or speaker is to make it perfectly plain to his audience.

In some of the cases that arise under this type of exposition, the writer must deal with his subject from the standpoint of definition; sometimes, from the standpoint of interpretation. In practically every case, however, he uses many types in the one essay. He must go hither and yon, he must explain in every conceivable way in order that his idea may be made clear. He must illustrate, he must expand, he must define, and he must reason. When he has finished, from each of the facets that he has polished in his process must shine new and clear light on the subject under discussion.

Because this type of exposition demands so many things, it has been impossible to pigeonhole it as easily as some of the others. The methods employed in making the explanation may be historical, they may be argumentative, they may be simple statements of facts. Whatever they are, they try to explain why certain modes of action exist, what particular ideas mean, and what are the underlying reasons for certain well-established principles.

The three examples that follow deal with the existence of certain conditions. Professor Scott's article is an explanation of a fact well known to some: that two kinds of language exist side by side among English-speaking peoples and that these

two kinds of language vary in England and America in inverse proportion to the importance of the subject that is being discussed. The second example has to do with an historical reason for a mode of action that is common among us: the difference that exists between the way in which men and women button their clothes. The third is an explanation of the American principle of government as that principle was set forth by Theodore Roosevelt at the time of his inauguration as President of the United States.

ENGLISH AND AMERICAN VERNACULAR *

That England and America, in some of their favorite modes of expression, have drifted far apart is apparent to everyone, but it still remains to be asked how far they have diverged, and in what direction. I suggest the hypothesis that the degree of divergence between the two vernaculars varies inversely as the degree of importance of the subject matter. That is, when the ideas to be expressed are trivial or facetious, the two vernaculars differ so widely that they may be said to be foreign languages one to the other. When, on the other hand, the subject matter is purely practical or commonplace the divergence, though noticeable, is of secondary importance. And finally, when the subject matter is of the highest quality, being concerned with ideal values and fundamental concepts, the divergence is so slight as to be almost negligible. We may thus distinguish three spheres: first, the idiom of slang (or of violent colloquialism); second, the idiom of commonplace reality; and third, the idiom of intellectual interests.

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That American slang differs fundamentally and in almost all respects from British slang is easily demonstrated. One has only to refer to the blankness of expression of an American who, in the hope of beguiling a weary hour on the railway train, opens a copy of *Punch*, or, on the other hand, to the puzzlement of the Englishman who attempts to read with due solemnity the more frivolous parts of the *Saturday Evening Post*. Each, as he wrestles with the idiom of the other, finds himself confronted by a set of words, phrases, and metaphors to the meaning of which nothing in his training or experience furnishes a proper clue. To most Americans English slang, when it is not brutal, is singularly vapid. To say nothing of *bloody*, which seems to occupy a bad eminence of its own, such terms as *old thing*, *ripping*, *top hole*, *tripper*, *not arf*, and *bally*, are not only unintelligible (on a first contact), but fatuous. They suggest to an American something just a degree above the drivelling of senility. *Silly old ass*, which Barrie uses several times in *Peter Pan*, is to me quite intolerable and degrades the scenes in which it occurs.

On the other hand, what can the untutored Englishman make of our smart, swaggering, often illiterate slang phrases, spawned by the hundred every day, many perishing almost as soon as they are brought into existence? I give a few choice examples:

Attaboy.
Me for it.
Nothing doing.
To horn in.
Stewed to the gills.
Dressed up like a plush horse.
I skun up the stairs.
Kid those roughnecks along.
The wallop in the velvet mitt.
This is where you get off.
It's time to hit the hay.
To spring the holier-than-thou.
Give him the razz for fair.

How will he translate our intensive *he* as in *he-stuff*, *he-literature*, *he-togs*, *he-hustling*, and even *he-man?* Or

our explosive monosyllables, *slob, yap, pep, guff, buck, bunk, simp?* Or our *poor* series, *poor fish, poor soak, poor boob, poor shrimp, poor dub,* with their not less expressive counterparts, *stinker and piker?* Where will he learn the esoteric meaning of *Key-noter, Weisenheimer, Some smear, He's the berries, A woman with a savvy, Put on lugs, Kind of all in, Where do you get that stuff?*

For most of these terms there is, I venture to say, no precise, certainly no adequate, equivalent in British speech either standard or colloquial. They are spontaneous expressions of American traits, emotions, and experiences that have no counterparts in British character or life.

The divergence of American from English idiom in this region of speech becomes still more evident when either side attempts to reproduce the other's modes of expression. Even if the words are pronounced, the borrowed expression, like Sentimental Tommy's "dagont," usually fails to accord with the context, and when choice of words, pronunciation and fitness to the emergency are all combined and marshalled with the utmost cunning, some minute freak of intonation or emphasis inevitably betrays the forgery.

The story is told of Mark Twain that one morning, as he was shaving in his bathroom, he cut himself in the cheek, whereupon, without regard to the household amenities, he uttered a series of the most horrible imprecations. To his astonishment there presently came floating back to him from the adjoining bedroom the same oaths in the same order but in a feminine voice. The humorist paused to listen to them and then remarked sadly: "You've got the words, Livy, but you haven't got the tune." Something like this on a large scale is what happens when an Englishman, especially an English

writer of fiction, meddles with American colloquialisms. He may get the words but the tune usually escapes him.

But passing now to the second sector of idiom, that which is concerned with commonplace realities, I find that its sphere is much more contracted than is generally believed. In speaking of the great majority of material things, England and America employ precisely the same terms. A spade is a spade in both countries. A bird is a bird (though in New York City it may be a *boid*). Pen, ink, paper, bread, milk, honey, eggs, cheese, water, soap, wood, cotton, wool, glass, nails, apples, pears, peaches, grass, weeds, teeth, tongue, lips, nose, iron, steel, copper, brass, chair, stool, rug, carpet, window, door, ceiling—all of these terms, and thousands more by which we talk about everyday things that appeal to our senses, are both good English and good American.

But because a few indispensable terms drawn from the vocabulary of daily routine differ widely in the two vernaculars the assumption is natural that the number of such words is very large, and this impression is heightened by the fact that the things designated are those which usually meet us at the barrier—railway tickets, foods, shops, tubes, lifts, laundry lists, garments, and the like. We need then, at this point, to answer two leading questions: First, how many words in this class differ in the two vernaculars; and second, how large a percentage of the total vocabulary do these divergences constitute.

The *New Oxford Dictionary* contains 401,047 words, of which at least 200,000 are words in current use. A careful examination of several hundred pages of the dictionary shows that the number of entries marked "United States" varies between one and two per cent of the current vocabulary, or, to be precise, 1.4 per cent to 1.95 per cent, and of these words, not more than one fifth are in what may be called urgent use. That is, the greater proportion of

them are words that would not be used at all in communications about commonplace affairs. We may say then, out of 200,000 words in current use in England, there will be not more than 400 words that are urgently required for current use in America. A similar count of selected portions of *Webster's Unabridged Dictionary* shows that the proportion of English words unfamiliar to Americans will not be greatly different from this.

The conclusions that may be drawn are not without interest. An American who committed to memory—let us say—a select list of four hundred to six hundred words used currently in Great Britain but not in the United States, or an Englishman who mastered a similar list of Americanisms, would be adequately equipped for the shocks and chances of a foreign tour, or even of a foreign residence, among his English-speaking cousins. The Englishman equipped with this list could order his bath, his breakfast, his bill, even his booze, though we are here getting into the region of slang. He could make a long-distance call without speaking of trunks, he could secure orchestra seats in place of stalls, arrange for a round trip instead of a return journey, and speak of a freight car instead of a goods van. He could pay taxes instead of rates, ask the way to the drug store instead of to a chemist's shop, seek the entrance to the subway instead of to the tube or underground, and have his wife's purchases charged at a drygoods store instead of put down at a draper's shop. In short, he could go through all of the humdrum of business and social life without incurring either rebuke or ridicule. And the same thing is true of the American in England. When this can be said of any two languages, the abyss between them is neither wide nor deep. The differences may be noticeable, may even at times be annoying, but in all probability they will cause amusement rather than chagrin.

Of the third sector of idiom, which I have called the idiom of intellectual interests, there is not much to be said except to repeat and emphasize the fact that here Great Britain and the United States find themselves at last on common ground. In all the words and patterns of speech used to express the profoundest and most useful ideas—in all the forms that must be employed in debating the crucial questions of life, thought, and conduct, the two languages differ slightly, if at all. One might safely offer a large reward to anyone who could assemble a dozen indispensable words of this class of which the meanings differ appreciably in the two vernaculars. Liberty, justice, law, hope, belief, love, duty, have the same force in England as in America.

If British idiom and American have unavoidably drifted apart, it is fortunate that the break has come in the petty or commonplace sector. The only cause for alarm, if there is one, is not that the Englishman may be unable to order a dinner in the American tongue, or that the American may find himself in the wrong motor bus; but that as time goes on the two moieties of the English-speaking world, growing apart in habits of thought, may ultimately come to attach divergent meanings to the words that describe their temper, ideals, and national aspirations—in short, that they may lose the power to be mutually intelligible when they speak internationally. Such an eventuality would set back the timepiece of civilization a century and a half.

—Fred Newton Scott: *McNaught's Monthly*, May 1925

WHY MEN'S CLOTHES ARE BUTTONED FROM LEFT TO RIGHT*

There is a curious contrast between men's and women's clothing. Few people are aware of it, although every-

*Reprinted by permission of *The American Magazine.*

body is constantly confronted with it. Men's clothing is buttoned from left to right. That is, the flap or edge is laid over the right. But women's clothing invariably is buttoned from right to left.

The most plausible theory is that *all* garments originally were fastened from right to left. Most people are right-handed; so it was most convenient to hold the right edge with the left hand, while the right hand was used for inserting the fastener. For this reason, the custom became established of fastening from right to left, even as it continues today with women's clothing. But the business of early man was mostly fighting; and as knives or swords were generally drawn with the right hand from the left side, the edge of a garment—if it buttoned from right to left—interfered with free action. For this reason men reversed the original procedure, all except such *men of peace* as Hebrew priests, who continue to this day to button from right to left.

—Frank B. Copley: *American Magazine*, May 1925

The Inaugural Address of Theodore Roosevelt is an interesting and brief example of the method by which a principle of action is discussed in expository form.

OUR RESPONSIBILITIES AS A NATION

No people on earth have more cause to be thankful than ours, and this is said reverently, in no spirit of boastfulness in our own strength, but with gratitude to the Giver of Good, who has blessed us with the conditions which have enabled us to achieve so large a measure of well-being and of happiness. To us as a people it has been granted to lay the foundations of our national life in a new continent. We are the heirs of the ages, and yet we have had to pay

few of the penalties which in old countries are exacted by the dead hand of a bygone civilization. We have not been obliged to fight for our existence against any alien race; and yet our life has called for the vigor and effort without which the manlier and hardier virtues wither away. Under such conditions it would be our own fault if we failed; and the success which we have had in the past, the success which we confidently believe the future will bring, should cause in us no feeling of vainglory, but rather a deep and abiding realization of all which life has offered us; a full acknowledgment of the responsibility which is ours; and a fixed determination to show that under a free government a mighty people can thrive best, alike as regards the things of the body and the things of the soul.

Much has been given to us and much will rightfully be expected from us. We have duties to others and duties to ourselves; and we can shirk neither. We have become a great nation, forced by the fact of its greatness into relations with the other nations of the earth; and we must behave as beseems a people with such responsibilities. Toward all other nations, large and small, our attitude must be one of cordial and sincere friendship. We must show not only in our words but in our deeds that we are earnestly desirous of securing their good will by acting toward them in a spirit of just and generous recognition of all their rights. But justice and generosity in a nation, as in an individual, count most when shown not by the weak but by the strong. While ever careful to refrain from wronging others, we must be no less insistent that we are not wronged ourselves. We wish peace; but we wish the peace of justice, the peace of righteousness. We wish it because we think it is right and not because we are afraid. No weak nation that acts manfully and justly should ever have cause to fear us, and no strong power

should ever be able to single us out as a subject for insolent aggression.

Our relations with the other Powers of the world are important; but still more important are our relations among ourselves. Such growth in wealth, in population, and in power as this nation has seen during the century and a quarter of its national life is inevitably accompanied by a like growth in the problems which are ever before every nation that rises to greatness. Power invariably means both responsibility and danger. Our forefathers faced certain perils which we have outgrown. We now face other perils, the very existence of which it was impossible that they should foresee. Modern life is both complex and intense, and the tremendous changes wrought by the extraordinary industrial development of the last half century are felt in every fiber of our social and political being. Never before have men tried so vast and formidable an experiment as that of administering the affairs of a continent under the form of a democratic republic. The conditions which have told for our marvelous material well-being, which have developed to a very high degree our energy, self-reliance, and individual initiative, have also brought the care and anxiety inseparable from the accumulation of great wealth in industrial centers. Upon the success of our experiment much depends; not only as regards our own welfare, but as regards the welfare of mankind. If we fail, the cause of free self-government throughout the world will rock to its foundations; and therefore our responsibility is heavy, to ourselves, to the world as it is today, and to the generations yet unborn. There is no good reason why we should fear the future but there is every reason why we should face it seriously, neither hiding from ourselves the gravity of the problems before us nor fearing to approach these problems with the unbending, unflinching purpose to solve them aright.

Yet, after all, though the problems are new, though the tasks set before us differ from the tasks set before our fathers who founded and preserved this Republic, the spirit in which these tasks must be undertaken and these problems faced, if our duty is to be well done, remains essentially unchanged. We know that self-government is difficult. We know that no people needs such high traits of character as that people which seeks to govern its affairs aright through the freely expressed will of the freemen who compose it. But we have faith that we shall not prove false to the memories of the men of the mighty past. They did their work, they left us the splendid heritage we now enjoy. We, in our turn, have an assured confidence that we shall be able to leave this heritage unwasted and enlarged to our children and our children's children. To do so we must show, not merely in great crises, but in the everyday affairs of life, the qualities of practical intelligence, of courage, of hardihood and endurance, and above all the power of devotion to a lofty ideal, which made great the men who founded this Republic in the days of Washington, which made great the men who preserved this Republic in the days of Abraham Lincoln.

—Theodore Roosevelt: *Inaugural Address*, March 4, 1905

EXERCISE

A great many of the things that we do have become so much a part of us that we never inquire why they are done so. Try to write a short paragraph in which you answer one of the following questions:

Why is the rule of the road, "Keep to the Right"?
Why is a ship always called "she"?

What is the origin of the military salute?

Why do Americans shake hands when they meet?

What are the meanings of the terms, "octavo," "quarto," and "duo-decimo" as applied to books?

What is the reason originally assigned for the type of sleeves in the Master of Arts' gown?

Why do we use fir trees at Christmas time?

How did the months of the year get their names?

These subjects are only suggestive; many others will occur to the members of any class.

CHAPTER VIII

Definition

Importance of Definition. The desire to be understood by one's hearers and readers is the wish of every honest speaker and writer. When one purposely dawdles with words or terms so that he may confuse those who attend on his words, he may be rightly accused of dishonesty; when he does so unconsciously, he can only be accused of ignorance.

At the root of this much-to-be-desired clarity lies a correct understanding of words and terms. A knowledge of the meanings of words and terms and a conscientious endeavor to use them discriminatingly always makes for clear judgment and enlightening discussion. Useless debate and unprofitable discussion result most often from confusion in the use of terms—either wilful or ignorant. Many important law cases have turned on the meaning of terms. Thousands of dollars have been expended in courts of law in trying to determine the guilt or innocence of persons who were said to be sane. Unfortunately, the law has not yet determined the meaning of the term sanity. The following sentence copied from a will recently contested illustrates clearly the difficulties that may arise from a misuse

of terms and from a lack of observance of the fundamental rules of grammatical construction:

> I hear empower my executor hear after mentioned to sell all my personal property outsid my home 326 —8 Ave wich is to go to Nora H—— and all my stock in Mexico in thee mines wich is hur name

The difficulty that arose here came from a confusion between personal property and real property as well as from a difficulty that arose in trying to ascertain what idea was referred to in the first "wich."

In fact, every useless debate that the world has had inflicted on it has resulted from a failure on the part of the debaters to define explicitly the terms of the proposition that was being debated.

Further, our understanding of our fellows depends on the way we define some of our commonest words. How many wars of words have raged about the term socialism! It has been confused with a score of schools of thought: the Marxian school, communism, nihilism, single taxation, government ownership, redistribution of wealth, Bolshevism, and the like. Define the term explicitly in a discussion and much of the arguing and contention ceases. Evolution, about which fundamentalist and modernist, clergy and laity, scholar and scientist, have quarreled, is a similar term. Melodrama, used ordinarily in literature as a term of condemnation, is another term of the same sort. Evaluate carefully any of

the following terms and the propositions in which they appear cease to be difficult of discussion: academic freedom, free trade, protection, high tariff, college spirit, vocational education, sportsmanship. It is only because all of them are not susceptible of a twenty- to thirty-word definition that weak minds find difficulty in understanding what they mean.

Professor Beers in discussing the definition of the word "Romanticism" makes the following comment:*

> There are words that connote so much, which take up into themselves so much of the history of the human mind, that any compendious explanation of their meaning—any definition which is not at the same time a rather extended description—must serve little other end than to supply a convenient mark of identification. How can we define in a sentence words like renaissance, philistine, sentimentalism, transcendental, Bohemia, pre-Raphaelite impressionist, realistic? . . . It may be possible to hit upon a form of words which will mark romanticism off from everything else—tell in a clause what it is *not;* but to add a positive content to the definition—to tell what romaticism *is*, will require a very different and more gradual process.

Then Professor Beers proceeds through a book of 425 pages to explain by example and interpretation what is his conception and definition of the word romanticism.

It is largely with words of this class—those that require extended definition and explication—that

* H. A. Beers: *English Romanticism in the Eighteenth Century*, p. 1.

this section has to do. These words or terms often lie in a land the limits of which are not clearly set, and the terms therefore require a rather careful explanation. Many interpretations have been given such terms; and the person who will define them carefully must gather all the meanings that have been given and, by applying the critical tests mentioned in the chapter on criticism, evolve from the mass of information that he has assembled the proper meaning of the word or term.

Kinds of Definition. Two kinds of definitions are recognized: (1) The so-called logical or dictionary definition. This is the definition that in one or two sentences, at most, points out the distinguishing and essential characteristics of the term or word defined. Such definitions are all-embracing. They do not seek to give detailed or exhaustive examinations of the term. They are really the generalizations that result from the more complete examinations of the terms which the literary definitions provide. (2) The literary definition. This is an extended composition that goes into detail, examining carefully all the possibilities of definition that the term suggests, and then illustrates and explains at length the term under discussion.

With the logical definition this chapter has little or nothing to do. It needs only to be observed that often, for the beginner in the matter of definition, the logical definition is a good starting point for the more exact literary definition. In many cases, how-

ever, the logical definition is like the proposition in a debate: it is that which needs defense or refutation. In such instances, definition comes perilously near argumentation. It differs from argumentation in this important respect: it is a complete summation of all that is to be said for and against the logical definition; and it results in a critical judgment on the material presented.

For both kinds of definition certain well-defined rules prevail. No definition is satisfactory that does not observe them. They may be succinctly stated as follows:

1. A definition should include all cases or examples embraced under the term defined.
2. It should exclude all cases or examples not embraced under the term defined.
3. It should deal only with those characteristics of the term defined that are common to all examples of that term. Mere accretionary matters should never have a place in a definition.
4. It should not contain the term defined nor any of its derivatives.
5. It should be simpler and clearer than the term defined.

These essential rules should always be borne in mind and should always be carefully followed. The best definitions preserve these principles. An examination of the definitions given on the following pages will show the care with which these principles have been observed.

A number of different avenues of approach to the definition of terms are available; what follows is an attempt to illustrate these methods by concrete examples. Newman's definition of a gentleman is inserted at this place as an example of what may be called definition by the method of accumulating details. Each sentence adds one or more items to the original idea contained in the first sentence of the paragraph.

A GENTLEMAN

Hence it is that it is almost a definition of a gentleman to say that he is one who never inflicts pain. This description is both refined and, as far as it goes, accurate. He is mainly occupied in merely removing the obstacles which hinder the free and unembarrassed action of those about him; and he concurs with their movements rather than takes the initiative himself. His benefits may be considered as parallel to what are called comforts or conveniences in arrangements of a personal nature: like an easy chair or a good fire, which do their part in dispelling cold and fatigue, though nature provides both means of rest and animal heat without them. The true gentleman in like manner carefully avoids whatever may cause a jar or a jolt in the minds of those with whom he is cast;—all clashing of opinion, or collision of feeling, all restraint, or suspicion, or gloom, or resentment; his great concern being to make everyone at his ease and at home. He has his eyes on all his company; he is tender towards the bashful, gentle towards the distant, and merciful towards the absurd; he can recollect to whom he is speaking; he guards against unreasonable allusions, or topics which may irritate; he is seldom prominent in conversation, and never wearisome. He makes light of favors while he does

them, and seems to be receiving when he is conferring. He never speaks of himself by a mere retort, he has no ears for slander or gossip, is scrupulous in imputing motives to those who interfere with him, and interprets everything for the best. He is never mean or little in his disputes, never takes unfair advantage, never mistakes personalities or sharp sayings for arguments, or insinuates evil which he dare not say out. From a long-sighted prudence, he observes the maxim of the ancient sage, that we should ever conduct ourselves towards our enemy as if he were one day to be our friend. He has too much good sense to be affronted at insults, he is too well employed to remember injuries, and too indolent to bear malice. He is patient, forbearing, and resigned, on philosophical principles; he submits to pain, because it is irreparable, and to death, because it is his destiny. If he engages in controversy of any kind, his disciplined intellect preserves him from the blundering discourtesy of better, perhaps, but less educated minds; who, like blunt weapons, tear and hack instead of cutting clean, who mistake the point in argument, waste their strength on trifles, misconceive their adversary, and leave the question more involved than they find it. He may be right or wrong in his opinion, but he is too clear-headed to be unjust; he is as simple as he is forcible, and as brief as he is decisive. Nowhere shall we find greater candor, consideration, indulgence: he throws himself into the minds of his opponents, he accounts for their mistakes. He knows the weakness of human reason as well as its strength, its province and its limits. If he be an unbeliever, he will be too profound and large-minded to ridicule religion or to act against it; he is too wise to be a dogmatist or fanatic in his infidelity. He respects piety and devotion; he even supports institutions as venerable, beautiful, or useful, to

which he does not assent; he honors the ministers of religion, and it contents him to decline its mysteries without assailing or denouncing them. He is a friend of religious toleration, and that, not only because his philosophy has taught him to look on all forms of faith with an impartial eye, but also from the gentleness and effeminacy of feeling, which is the attendant on civilization.

—John Henry Newman: *Scope and Nature of University Education*

The following short extract is definition by implication or illustration. An extended discussion of the word "tact" is not given, but what the word means is readily understood after the comment of the writer regarding the two eminent gentlemen has been read.

TACT

There are always two ways of saying a thing. The existing tension between Signor Cippico and Professor East of Harvard at the Williamstown Conference would not have arisen if the latter had chosen to make his approach somewhat indirect. Instead of saying that Italy has been sending us the dregs of her population, Professor East should have said what a pity it is that the superb qualities of the Italian people which have manifested themselves so strikingly and beneficently throughout her history should be only imperfectly represented in the emigrants whom she has sent to this country. And Signor Cippico, instead of declaring that Professor East's remarks were beneath contempt, should have suggested that a broader acquaintance with the character of the Italian immigrant than can be secured in the secluded shades of Cambridge would be bound to modify the opinion of an eminent scholar whose familiarity with the

high realms of thought is probably superior to his knowledge of the facts of the real world.

—*The New York Times*, August 9, 1925

In the light of this extended definition by illustration read the definition from Webster's Dictionary:

Tact *n.* . . . 3. Sensitive mental perception; esp., ability to deal with others without giving offense.

It will readily be perceived how much clearer is the longer definition. It will also be perceived how, out of numerous examples of this sort, the briefer logical definition covering all cases where this sort of sensitive mental perception might be required could be constructed.

Sometimes a word is defined by repeating and commenting upon a number of more compact statements made by others. In Lowell's definition three aspects of democracy are stressed by repeating definitions or stories, and the result is a reasonably clear conception of the word.

DEMOCRACY

Few people take the trouble of trying to find out what democracy really is. Yet this would be a great help, for it is our lawless and uncertain thoughts, it is the indefiniteness of our impressions, that fill darkness, whether mental or physical, with specters and hobgoblins. Democracy is nothing more than an experiment in government, more likely to succeed in a new soil, but likely to be tried in all soils, which must stand or fall on its own merits as others have done before it. For there is no trick of per-

petual motion in politics any more than in mechanics. President Lincoln defined democracy to be "the government of the people by the people for the people." This is a sufficiently compact statement of it as a political arrangement. Theodore Parker said that "Democracy meant not 'I'm as good as you are,' but 'You're as good as I am.'" And this is the ethical conception of it, necessary as a complement of the other; a conception which, could it be made actual and practical, would easily solve all the riddles that the old sphinx of political and social economy who sits by the roadside has been proposing to mankind from the beginning, and which mankind has shown such a singular talent for answering wrongly. In this sense Christ was the first true democrat that ever breathed, as the old dramatist Dekker said he was the first true gentleman. The characters may be easily doubled, so strong is the likeness between them. A beautiful and profound parable of the Persian poet Jellaladeen tells us that "One knocked at the Beloved's door, and a voice asked from within 'Who is there?' and he answered 'It is I.' Then the voice said, 'This house will not hold me and thee'; and the door was not opened. Then went the lover into the desert and fasted and prayed in solitude, and after a year he returned and knocked again at the door; and again the voice asked 'Who is there?' and he said 'It is thyself'; and the door was opened to him." But that is idealism, you will say, and this is an only too practical world. I grant it; but I am one of those who believe that the real will never find an irremovable basis till it rests on the ideal. It used to be thought that a democracy was possible only in a small territory, and this is doubtless true of a democracy strictly defined, for in such all the citizens decide directly upon every question of public concern in a general assembly. An example

still survives in the Swiss canton of Appenzell. But this immediate intervention of the people in their own affairs is not the essence of democracy; it is not necessary, nor indeed, in most cases, practicable. Democracies to which Mr. Lincoln's definition would fairly enough apply have existed, and now exist, in which, though the supreme authority reside in the people, yet they can act only indirectly on the national policy. This generation has seen a democracy with an imperial figurehead, and in all that have ever existed the body politic has never embraced all the inhabitants included within its territory, the right to share in the direction of affairs has been confined to citizens, and citizenship has been further restricted by various limitations, sometimes of property, sometimes of nativity, and always of age and sex.

—James Russell Lowell: Presidential Address, Birmingham, England.

Sometimes it becomes necessary to define the terms that are to be used in a legislative act in order that no misconstruction of the act will be possible. Such a situation generally fixes more or less arbitrary limitations on the terms used. The following brief extract from an act of the Pennsylvania Legislature illustrates the form:

AN ACT

Authorizing the condemnation and appropriation of lands, waters, and other property by public service companies holding limited power permits and limited water supply permits granted by the Water Supply Commission of Pennsylvania, and providing a method

for the assessment of damages arising from such appropriation.

Section 1. Be it enacted, &c., That where used in this act singular words shall be construed as including the plural, masculine words shall be construed as including the feminine and neuter, and the following terms shall have the following meanings respectively designated for each:

The term "commission" means the Water Supply Commission of Pennsylvania.

The term "dam" means a dam, wall, wing wall, wharf, embankment, abutment, projection, or similar analogous structure, or any other obstruction whatever in, along, across, or projection into any stream or body of water wholly or partly within, or forming part of the boundary of, this Commonwealth, except tidal waters of the Delaware River and of its navigable tributaries.

The term "dam to develop water power" means a dam for the purpose of developing water power only, or a dam for said purpose and any other purpose.

The term "dam to supply water for steam power" means a dam for the purpose of storing, cooling, diverting, and using, or any of them, water for steam raising or steam condensation, or both, in the generation of electric energy for use in public service, which is not a dam to develop water power as hereinbefore defined.

. . . . . .

The term "change in stream to develop water power" means any change or diminution of the course, current, or cross section of any stream or body of water for the sole purpose of developing water power, or for said purpose and any other purpose, whether the dam or other means effecting the change be within or without the Commonwealth of Pennsylvania.

. . . . . .

The term "power project" means a complete unit of improvement or development for the procuring or supply, or both, of water power, or the procuring or supply, or both, of light, heat, and power, or any of them, by electricity, consisting of a power dam or change in stream to develop power, or both, for which a limited power permit at any time is being sought or shall have been granted, a power house, all water conduits, dams, and appurtenant works which are a part of said unit, and all storage, diverting, or fore bay reservoirs directly connected therewith, the primary line or lines transmitting power from the power house to the point of junction with the distribution system or with an interconnected primary transmission system, all miscellaneous structures used and useful in connection with such unit, or any part thereof, and all water rights, rights of way, ditches, dams, reservoirs, lands or interests in lands, the use and occupancy of which are necessary or appropriate in the construction, maintenance, and operation of such unit.

—Extract from an Act of the Pennsylvania Legislature, Approved June 14, 1923

The dictionary definition of "philosophy" is "the knowledge of phenomena as explained by, and resolved into, causes and reasons, powers and laws." Often a literary definition is merely an explication of such a definition. Notice in the following extract how Emerson has expressed the dictionary idea in the first sentence and then has expanded and explained it.

PHILOSOPHY

Philosophy is the account which the human mind gives to itself of the constitution of the world. Two cardinal

facts lie forever at the base; the one, and the two: 1. Unity, or Identity; and, 2. Variety. We unite all things by perceiving the law which pervades them; by perceiving the superficial differences and the profound resemblances. But every mental act—this very perception of identity or oneness, recognizes the difference of things. Oneness and otherness. It is impossible to speak or to think without embracing both.

The mind is urged to ask for one cause of many effects; then for the cause of that; and again the cause, diving still into the profound; self-assured that it shall arrive at an absolute and sufficient one—a one that shall be all. "In the midst of the sun is the light, in the midst of the light is truth, and in the midst of truth is the imperishable being," say the Vedas. All philosophy, of East and West, has the same centripetence. Urged by an opposite necessity, the mind returns from the one to that which is not one, but other or many; from cause to effect; and affirms the necessary existence of variety, the self-existence of both, as each is involved in the other. These strictly-blended elements it is the problem of thought to separate and to reconcile. Their existence is mutually contradictory and exclusive; and each so fast slides into the other that we can never say what is one, and what it is not.

—Ralph Waldo Emerson: "Plato"

Often a word becomes clearer to the reader if he has before him an analysis of the possible characteristics of the idea for which the word stands. Such an analysis of the term "slang" is to be found in Victor Hugo's *Les Miserables*. In the chapter from which the following passage is adapted Hugo has analyzed the various elements that are to be found

in slang and has given many illustrations of these elements as they appear in the French language. The elements that are there mentioned are also present in English slang. It has been thought wise, however, to omit Hugo's illustrative material as not pertinent to this discussion.

SLANG

Slang is the language of those in darkness.

Thought is affected in its gloomiest depths, and social philosophy is harassed in its most poignant undulations, in the presence of this enigmatical dialect, which is at once branded and in a state of revolt. There is in this a visible chastisement, and each syllable looks as if it were marked. The words of the common language appear in it, as if branded and hardened by the hangman's red-hot irons, and some of them seem to be still smoking; some phrases produce in you the effect of a robber's fleur-de-lysed shoulder suddenly exposed, and ideas almost refuse to let themselves be represented by these convict substantives. The metaphors are at times so daring that you feel that they have worn fetters.

Still, in spite of all this, and in consequence of all this, this strange patois has by right its compartment in that great impartial museum, in which there is room for the oxidized *sou* as well as the gold medal, and which is called toleration. Slang, whether people allow it or no, has its syntax and poetry, and is a language. If, by the deforming of certain vowels, we perceive that it has been chewed by Mandrin, we feel from certain metonyms that Villon spoke it.

From a purely literary point of view, few studies would be more curious or fertile than that of slang. It is an entire language within a language, a sort of sickly grafting

which has produced a vegetation, a parasite which has its roots in the old trunk, and whose sinister foliage crawls up the whole one side of the language. This is what might be called the first or common notion of slang, but to those who study the language as it should be studied, that is to say, as geologists study the earth, slang appears like a real alluvium. It is a deep and strange formation, a subterranean edifice built up in common by all scoundrels. Each accursed race has deposited its stratum, each suffering race has let its stone fall, each heart has given its pebble. A multitude of wicked, low, or irritated souls who passed through life, and have faded away in eternity, are found there almost entire, and to some extent still visible, in the shape of a monstrous word.

In addition to the philological origins, slang has other and more natural roots, which issue, so to speak, directly from the human mind. In the first place, there is the direct creation of words, for it is the mystery of language to paint with words which have, we know not how or why, faces. This is the primitive foundation of every human language, or what might be called the granite. Slang swarms with words of this nature, immediate words created all of one piece, it is impossible to say when, or by whom, without etymologies, analogies, or derivatives—solitary, barbarous, and, at times, hideous words, that have a singular power of expression and are alive. Nothing can be stranger than these words which form transparent masks; some of them are at the same time grotesque and terrible, and produce the effect of a Cyclopean grimace. In the second place, slang constantly uses metaphor. Metaphor is an enigma in which the robber who is scheming a plot, or the prisoner arranging an escape, takes refuge. No idiom is more metaphorical than slang. At times, in proportion as slang passes from the first to the second stage, words pass from the savage and primi-

tive state to the metaphorical sense. Thirdly, there is expediency: slang lives upon the language, uses it as it pleases, and when necessity arises limits itself to denationalizing it summarily and coarsely.

Slang, being the idiom of corruption, is itself quickly corrupted. Moreover, as it always tries to hide itself so soon as it feels that it is understood, it transforms itself. Exactly opposed to all other vegetables, every sunbeam kills what it falls upon. Hence slang is being constantly decomposed and recomposed, and this is an obscure and rapid labor which never ceases, and it makes more way in ten years than language does in ten centuries. All the words of this language are perpetually in flight, like the men who employ them. Still, from time to time, and owing to this very movement, the old slang reappears and becomes new again. It has its headquarters where it holds its ground.

—Victor Hugo: *Les Miserables* (Adapted)

Sometimes a word that is frequently used is defined by recounting the history and changing ideals of the thing for which it stands. One of these words is "fraternities," a definition of which follows.

FRATERNITIES *

These institutions which we call college fraternities have underlying principles and ideals of a distinctively American character, and with a single possible exception, have not even a remote connection with European student societies. In the beginning they were contemporaneous with the literary societies which existed in all the colleges, and were greatly influenced by them. The fraternities of

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that time had to be literary as well as social, for the American student of a century ago liked to spend a large part of his spare time in pursuit of knowledge. The literary societies furnished this to the college boy who lived with his tutors. When the boarding school was succeeded by the enlarged college of the nineteenth century, the literary societies continued. But the former personal element had disappeared from the college life and also from the literary societies. The fraternities quite naturally grew up to provide their members with the personal associations combined with the literary training which they still desired. Though in somewhat different form, the fraternities preserved the close friendships among the students previously afforded by the boarding schools. All of these societies inculcated obedience, respect, loyalty, scholarship, good fellowship, and a high college spirit. That they exerted a powerful influence for good in the lives of their members is attested by the brilliant accomplishments of the early American statesmen, scholars, and writers who received much of their youthful training from the keen, yet friendly criticism of the companions with whom they were closely associated in the chapters of these fraternities.

—Wayne M. Musgrave: *College Fraternities*

At still other times, a term is defined by comparing and contrasting it to similar terms. William Hazlitt's essay which follows is such a definition.

ON FAMILIAR STYLE

It is not easy to write a familiar style. Many people mistake a familiar style for a vulgar style, and suppose that to write without affectation is to write at random. On the contrary, there is nothing that requires more pre-

cision, and, if I may so say, purity of expression, than the style I am speaking of. It utterly rejects not only the unmeaning pomp, but all low, cant phrases, and loose, unconnected, *slipshod* allusions. It is not to take the first word that offers, but the best word in common use; it is not to throw words together in any combinations we please, but to follow and avail ourselves of the true idiom of the language. To write a genuine familiar or truly English style is to write as anyone would speak in common conversation who had a thorough command and choice of words, or who could discourse with ease, force, and perspicuity, setting aside all pedantic and oratorical flourishes. Or to give another illustration, to write naturally is the same thing in regard to common conversation as to read naturally is in regard to common speech. It does not follow that it is an easy thing to give the true accent and inflection to the words you utter, because you do not attempt to rise above the level of ordinary life and colloquial speaking. You do not assume, indeed, the solemnity of the pulpit, or the tone of stage declamation; neither are you at liberty to gabble on at a venture, without emphasis or discretion, or to resort to vulgar dialect or clownish pronunciation. You must steer a middle course. You are tied down to a given and appropriate articulation, which is determined by the habitual associations between sense and sound, and which you can only hit by entering into the author's meaning, as you must find the proper words and style to express yourself by fixing your thoughts on the subject you have to write about. Anyone may mouth out a passage with a theatrical cadence, or get upon stilts to tell his thoughts; but to write or speak with propriety and simplicity is a more difficult task. Thus it is easy to affect a pompous style, to use a word twice as big as the thing you want to express:

it is not so easy to pick upon the very word that exactly fits it. Out of eight or ten words equally common, equally intelligible, with nearly equal pretensions, it is a matter of some nicety and discrimination to pick out the very one, the preferableness of which is scarcely perceptible, but decisive. The reason why I object to Dr. Johnson's style is that there is no discrimination, no selection, no variety in it. He uses none but "tall, opaque words," taken from the "first row of the rubric"—words with the greatest number of syllables, or Latin phrases with merely English terminations. If a fine style depended on this sort of arbitrary pretension, it would be fair to judge of an author's elegance by measurement of his words and the substitutions of foreign circumlocutions (with no precise associations) for the mother-tongue. How simple it is to be dignified without ease, to be pompous without meaning! Surely it is but a mechanical rule for avoiding what is low, to be always pedantic and affected. It is clear you cannot use a vulgar English word, if you never use a common English word at all. A fine tact is shown in adhering to those which are perfectly common, and yet never falling into any expressions which are debased by disgusting circumstances, or which owe their signification and point to technical or professional allusions. A truly natural or familiar style can never be quaint or vulgar, for this reason, that it is of universal force and applicability, and that quaintness and vulgarity arise out of the immediate connection of certain words with coarse and disagreeable or with confined ideas. The last form what we understand by *cant* or *slang* phrases. To give an example of what is not very clear in the general statement, I should say that the phrase "To cut with a knife" or "To cut a piece of wood" is perfectly free from vulgarity, because it is perfectly common; but to "cut an acquaint-

ance" is not quite unexceptionable, because it is not perfectly common or intelligible, and has hardly yet escaped out of the limits of slang phraseology. I should hardly therefore use the word in this sense without putting it in italics as a license of expression, to be received *cum grano salis*. All provincial or by-phrases come under the same mark of reprobation—all such as the writer transfers to the page from his fireside or a particular *coterie*, or that he invents for his sole use and convenience. I conceive that words are like money, not the worse for being common, but that it is the stamp of custom alone that gives them circulation or value. I am fastidious in this respect, and would almost as soon coin the currency of the realm as counterfeit the King's English.

. . . . . .

The proper force of words lies not in the words themselves, but in their application. A word may be a fine-sounding word, of an unusual length, and very imposing from its learning and novelty, and yet in the connection in which it is introduced may be quite pointless and irrelevant. It is not pomp or pretension, but the adaptation of the expression to the idea, that clinches a writer's meaning—as it is not the size or glossiness of the materials, but their being fitted each to its place, that gives strength to the arch; or as the pegs and nails are as necessary to the support of the building as the larger timbers, and more so than the showy, unsubstantial ornaments. I hate anything that occupies more space than it is worth. I hate to see a load of bandboxes go along the street, and I hate to see a parcel of big words without anything in them.

. . . . . .

It is as easy to write a gaudy style without ideas as it is to spread a palette of showy colors, or to smear in a

flaunting transparency. "What do you read?" "Words, words, words." "What is the matter?"—"Nothing," it might be answered. The florid style is the reverse of the familiar. The last is employed as an unvarnished medium to convey ideas; the first is resorted to as a spangled veil to conceal the want of them. When there is nothing to be set down but words, it costs little to have them fine. *Rouge* high enough, and never mind the natural complexion. The vulgar, who are not in the secret, will admire the look of preternatural health and vigor; and the fashionable, who regard only appearances, will be delighted with the imposition. Keep to your sounding generalities, your tinkling phrases, and all will be well. Swell out an unmeaning truism to a perfect tympany of style. A thought, a distinction is the rock on which all the brittle cargo of verbiage splits at once. Such writers have merely *verbal* imaginations, that retain nothing but words.

—William Hazlitt: *Essays*

At times it is desirable to define a word not by exact definition but by suggesting what it is not. Such a method may be followed by a statement of what the term actually is. It is often just as effective to remove misconceptions about the term and allow the reader to construct for himself the correct definition of the term. This method may be called either the method of elimination or the method of obverse iteration. The extract from President Neilson's address is a definition of his conception of a college teacher by the method of elimination and suggestion.

A COLLEGE TEACHER DEFINED *

The supreme task of the executive in the American college and university is that of the selection of staff. The thousand and one other concerns in which he must engage, from finance to drainage and from the handling of parents and alumni to dormitory architecture and theories of the curriculum, are negligible in comparison with the choice of the men and women on whom finally depends the success of his institution in the accomplishment of the main task of education. In this business of selection one of the first issues is the question of preference between the teacher and the scholar. It is commonly agreed that for undergraduates the prime requisite is teaching power, for graduates erudition; and, perhaps, with the qualifications that will occur to everyone, we may let this pass. But undergraduates are much more numerous than graduate students, and good teachers are probably rarer than good scholars. Yet our advanced instruction is planned mainly for the production of scholars, hardly at all for the training of teachers. This has long been recognized, yet nothing is done about it. Years ago, when I was a graduate student looking forward to a teaching career, I raised the question with a distinguished scholar at whose feet I was sitting, and the reply was, "This is a university, not a normal school." To the implications of the retort I may return later.

When this problem is viewed from the point of view of the individual instructor, it may take the form of the question as to whether he is more interested in the subject or in the pupil. There is, of course, much to be said

* From the Presidential Address delivered to the Modern Language Association of America at Columbia University on December 29, 1924. Reprinted by permission of the author from the *Publications of the Modern Language Association*, March, 1925.

for a teacher's having abounding enthusiasm for his subject and little good is to be expected without it. But such enthusiasm is not incompatible with some consideration of the general task before us. The problem of the undergraduate college is not merely that of providing abundance of the waters of learning, it is also that of inducing those who are led or driven thither to drink. This requires skill in presentation, power of evoking curiosity, and not merely enthusiasm but a contagious enthusiasm. These seem to be possessed by only a minority of the men and women who regard themselves as prepared for college teaching; and who, if they are candid with themselves, find it out sooner or later. If later, they probably think they cannot afford to do anything about it, or think that nothing can be done about it. I presume the majority of my hearers believe that the teacher is as definitely "born, not made" as the poet, and are even now preparing to resist a plea for pedagogy with all the ancient weapons of our most prejudiced profession. I am not going to make any such plea. I wish only to urge upon your attention the serious nature of the problem involved in the absence of practical skill in so large a proportion of college teachers. Apart from what is commonly called professional training, I have come to believe in the importance of two factors that, viewed properly, might help to improve the situation. I have found, first, that many—not all—poor teachers are so because their whole intellectual life is sluggish. It is only rarely that a man who is actively getting and giving in the intellectual interchange of the college community is dull in the classroom. His teaching may be lopsided, but his pupils are likely to get something for their money, and his colleagues are the better for his fellowship. I really mean, of course, intellectual interchange: not the interchange of anecdote at the club. A faculty can go far without scientific pedagogy

if it lives in an atmosphere friendly to ideas, friendly to the curiosity that seeks to extract the meaning from events, ancient, medieval, or contemporary.

I have found, secondly, that the solution of the larger educational problems is terribly hampered by departmentalism. I need no more striking instance of this than that which I contemplate on looking back at my own unregenerate past. For twenty years I sat and voted on college and university faculties, and in the presence of controversial issues hardly raised my eyes beyond the horizons of the department of English. I should probably never have found out had not fate suddenly placed me where my duties made me realize my all but complete innocence of any thought-out scheme or policy, any well considered general ideas on what the whole business of college education was about. And now, as hesitatingly I seek to arrive at such ideas and present them to my colleagues, I find myself faced from without, as previously unconsciously from within, by the instinct to defend the chosen subject, to guard the interests of the single department, to support the measures that will bring it the maximum of equipment, of enrollment, of prestige. Such partisanship, of course, hinders educational progress in general; but it also lessens the teaching effectiveness of the partisan, who could not but teach better if he saw the problem involved not only as the exposition, say, of French idiom, but as the mental development of each student before him. It reminds me of certain country roads I have traveled in the foothills of the Black Forest where the use of centuries has sunk them far below the level of the surrounding fields, and where the wayfarer may walk through the midst of beautiful prospects, yet be unable to see over the embankments which hem him in. Loyalty to one's own branch of learning is, of course, commendable;

but, like all provincial patriotisms, it is apt if uncontrolled to be at war with the larger interests of the race.

The teacher of the type I have been describing usually believes he has, and indeed does have, certain educational fundamentals which determine his attitude and vote on general questions of policy; but he seldom realizes the assumption which underlies these principles. This is usually one of two. The commoner is the assumption that the educational system which produced him must have been a pretty good system. The rarer—rarer because humility is rarer than arrogance—is that the educational system which produced him, and left him with so much to do for himself later, must have been pretty bad. In other words, while we have no educational science, we have a dominant educational superstition. Our tests are subjective tests. I have seldom listened long to a discussion of educational aims or policies without noting the tendency of the discussion to become a series of autobiographical narratives, carrying, all unknown to the narrator, one of the two implications I have mentioned.

Now I submit that such a situation is unworthy of men who have undergone a discipline as rigorous as most of us have. We are almost all in some sense scientists, and in our own *Fach* are aware of the danger and futility of subjective tests. It is true that there are few fields in which scientific experiment is as difficult as it is in education. At the bottom of the difficulty lies the fascinating and perplexing fact of the infinite variety of human beings. But in many fields of method and result controlled experiment is possible if we can overcome our inertia, our fear of pedagogy, our love of the old, easy, hit-or-miss routine. It is our shame that for so long we have been content to follow this routine without knowing whether it works or no. For all we can prove, our students may learn in spite of our methods rather than because of them, become

decent citizens in spite of our schools and colleges rather than because of them. I am not equipped to pass judgment upon the newer methods of measurement in education which are beginning to force themselves upon our notice, but of this I am sure that for our own self-respect we are shortly going to be forced to do our own measuring, to abandon the vague impressionism which leads us to prefer one way rather than another, and to seek to build steps upward more solidly based upon demonstrated fact.

—William Allan Neilson: "The Point of View of a Professor Turned President"

Finally, we come to a type of definition wherein the author examines a term in the light of the commonly accepted interpretation of that term. Sometimes, a number of definitions and commonly accepted interpretations of the term are stated and their validity is examined. Such a method has been pursued by Professor Richardson in his search for a definition of the idea, "A Liberal College." He has considered its purpose and defined it in terms of that purpose.

THE PURPOSE OF THE COLLEGE *

What then, in view of the opportunities and liabilities presented to the American college, shall be its objective?

There is no lack of definition. It has always been the task of presidents and other administrative officers to justify the existence of institutions under their charge; to convince the public that the advantages gained from the college justify the removal of young men and women from

* Chapter II of *A Study of the Liberal College* by Leon B. Richardson, a report to the President of Dartmouth College, reprinted by permission.

the business of the world for four years at the very beginning of the productive period. These definitions are not in the main contradictory, but in two particulars they are sometimes unsatisfactory. From the nature of the thing defined an element of vagueness, a lack of direct focus, is at times observed. Real want of clearness of ideas may be concealed by verbiage, which may impress but does not inform. In other words, the type of thought misnamed academic is not absent from the productions of educational leaders. More common, however, is the substitution of subsidiary and indirect factors for the main purpose; and over-emphasis of results relatively remote, and a neglect of the immediate aim from which it is hoped these results may be gained.

When we consider all aspects of the problem we must, I think, come to the conclusion that the purpose of the college is primarily intellectual. It is almost obvious that so far as the training of the intellect becomes a diminishing factor in the ideals of the institution, so far is it failing in its efforts; so far as such training is the center of its life, so far is it fulfilling its obligations to the community. The college must do other things than train the intellect, but it must see to it that such intellectual training is never lost sight of as its guiding principle. *Our aim may therefore be stated as the stimulation and development of those gifts of intellect with which nature has endowed the student, so that he becomes, first, a better companion to himself through life, and, second, a more efficient force in his contacts with his fellow men.* The process is twofold. The undergraduate must first become acquainted with the work of men of the past; with the conclusions which they have drawn. But if the process stops at that point it is of little avail: real education has but just begun. Starting with the basis thus gained, and with consideration of and respect for the conclusions of the great figures of the past,

he must then be trained to think for himself, to formulate his own philosophy of life, to be modest, but modestly self-reliant, in the world of thought. Such a process is not easy. The accumulation of fact in itself involves drudgery, self-discipline, restraint. Moreover, thinking, in the real sense, is a process painful to the average man; it is easier to take opinions ready formed. President Butler may be extreme, and is certainly ungallant, in his assertion that the labor of forming opinions for themselves is too much for most men and almost all women, but he is quite right when he says that clear thinking can be gained only by practice. He might have added that thinking so-called—rambling speculation unchecked by knowledge of or respect for underlying fact—is a growing vice, not only among college students, but among the American people as a whole.

Although the process thus described be none of the easiest, the result, if attained, is well worth the time and labor. The surprise in finding that the intellectual life is in the long run pleasant rather than irksome; the recognition of a new resource not to be lost through life; the sense of power over one's mental equipment; the feeling of companionship with the great minds of the past; the establishment of points of contact with so many of those whom one meets in the work of the day: all these make of life a continuing adventure quite beyond the scope of that man whose intellectual interest has never been aroused. If the college, profiting by its unique opportunity of acting upon the youth at the period when from a boy he is becoming a man, is successful in the work of arousing and stimulating his intellectual curiosity, it will be found to have justified its existence.

While therefore the work of the college, if successful, is useful in the highest degree, it destroys its own effectiveness if conducted in a spirit which is utilitarian. If a

parent is anxious to determine the direct financial value which individual courses, or the course as a whole, may have for his boy, he can be given no satisfactory answer. If the advantages outlined above do not appeal to him, if his look remains fast on dollars and cents, he had much better place his son in an institution of a different type. The advice to the student of such educational writers as Mr. Birdseye, "Take up no study without some utility in it that you can see, understand, and value," would, if followed in a narrow sense, destroy the very spirit of the liberal college. There is a difference in utilities and one of the tasks of the college is properly to separate and value them. It is the habit of some to look for statistical proof of the practical worth of the college degree; to count the number of graduates enrolled in *Who's Who;* to collect information of the earning capacity of college men; to point to the number of presidents and others high in public life who have received a college training. Such attempts at measurement are futile, and in fact often defeat their own purpose: for the individual of prominence selected as a college product may well be one to whose motives and methods no college would point with pride, while quite frequently the most worthy graduate of the institution is the relatively obscure individual whose inner life is so rich and full as to make him a happy man and a source of happiness to those among whom he dwells. It ought of course to be true that one who has really received the advantages which the college is supposed to offer should be more successful in any career than is one who lacks them. In the words of President Wilson:

> The merely skilled man is always a servant, with a chance through change of method that his services will not be needed. What the world needs at the top is not a few but many men with the power to organize and guide. The college is meant to stimulate in a considerable number

of men what would be stimulated in only a few if we were to depend entirely upon nature and circumstances.

But after all, the claim of the college to its place must rest not on the material aid which it affords to its graduates, but to the enlargement which it should bring to their lives. We must eat, it is true, but after eating, what then?

Nevertheless, we must not push our principle to such extreme as to destroy its validity. There is a tendency among some who are guardians of the college to divide the curriculum into the vocational and the liberal; to exclude the former and to hold fast to the latter; to discriminate by subjects rather than by spirit. We do not normally include carpentry in the curriculum of the college, while we always do include Latin; although it is possible—with some stretch of the imagination, it is true—to conceive of the former, in the hands of an inspiring teacher, as essentially liberal, while no particular effort is required to bring to mind courses in the latter, even those given by eminent specialists, which are nothing but vocational. Such comparisons are, of course, extreme; but in general it is the spirit of the teacher rather than the subject matter which divides training from education. Moreover, training is always a part of education and, as such, the college must do its share in meeting its demands. We cannot expect the boy through the four years of his college life entirely to give up contact with the things which interest him; to lose touch with the demands of the career which is to be his. In these cultural years we should see the student well started in the direction which he is later to follow, not only in knowledge but to some extent in method. The anxious fears of those who are continually on their guard lest something with the taint of vocationalism should slip into the curriculum of the liberal college are hardly justified, either in theory or in fact. With the purpose of the institution as a guide,

keeping firmly to its spirit, that college which has the advantage of sane common sense on the part of its leaders can hardly go far astray. The result will be neither a mass of cultural material with no direct application to the future work of the individual, nor an aggregate of special information with no illumination from the great world of thought outside, but a judicious combination of the two, each vivified by continual contact with the other.

But what are we to say of the somewhat pretentious statements of the purpose of the college which eminent educators sometimes set forth: purposes which have the advantages of a glamour to which the matter-of-fact discussion above can have no claim? We are told by some that the purpose of the college is to train for public service; for devotion to the common weal. Others raise the shibboleth of training for citizenship. An eminent professor has devoted a book to the somewhat vague thesis that America is the educational motive of the age, and the obligation of the college is the promotion of the American social order. Others stress the training for leadership, and the student, flattered as a freshman by the unexpected deference paid to him by some eminent publicist as the future leader of the community, becomes the prey of intense boredom when the hundredth publicist comes with the same tale in his senior year. And so it goes.

If these statements are analyzed, what becomes of their validity? If the intellectual curiosity of the boy has been inspired, if he has acquired a taste for study and the beginnings of a habit of reasoning for himself on the basis of acquired fact, if, in short, he is beginning really to think, he will of course be more likely to take an interest in public affairs, to be more effective in his application of that interest; he may even be able to figure out what the learned professor means by the promotion of the American

social order; he certainly will be a more effective leader if innate powers of leadership are his. But how is a college, in cold blood, deliberately and consciously, to plan its work for the fulfillment of purposes like these? How are we to train for citizenship except by training in intelligence? How are we to train for leadership at all? How are we to train for devotion to the public service? Moral lectures on the obligations of the college man to the public weal seldom leave a deep impression, and what impression may be made is destroyed by endless repetition. In short, these objects, as the conscious and direct purposes of the college, are utterly incapable of realization. If attained at all, as they often are, they come as corollaries to the careful and thorough training of the intellect.

Not so easy to dismiss is the purpose set up by many; the training of character. It is obvious that the development of intelligence uncontrolled by moral purpose becomes a danger rather than a help to the state. To go to extremes, a college which should turn loose upon the community a body of highly intellectual criminals would not long be allowed to exist. Every college teacher is familiar with students in whom the highly developed intellect is directed by motives the reverse of praiseworthy. Such students are likely to come to the public eye in ways which are not flattering to the institution deemed to be responsible for them.

The old college had a perfectly definite idea of how character should be developed; namely through moral, and particularly through religious, instruction. Such a view still exists in many institutions, especially in the denominational colleges. It ranges all the way from denunciation of the "damnable doctrine of evolution" to the most enlightened and sympathetic consideration of the religious and moral needs of the student. In some cases the attempt is made to shield the student from

religious and therefore moral heresies. Other institutions have largely abandoned the effort to inculcate morality or religion by formal instruction; or at any rate by required courses. It is quite impossible to compare definitely the graduates of the two classes of institutions, but their moral tone seems to be much the same. It is certainly true that it is higher among the graduates of the eastern colleges than it was fifty years ago; in days when watching was more careful.

This discussion does not, however, quite hit the idea of character, which is too subtle to pin to a religious basis. All are agreed that it is most highly desirable that the student should leave a college with a moral stamina which will carry him successfully through the storms of life, but the question again rises, how is it to be done? The difficulty is best set forth by President Wilson: *Conscious cultivation of character produces nothing but that which makes a man intolerable to his fellows. Character is a by-product.* So again we seem to be left in the dark as to the mode of attack. Fortunately, the influence of high character is contagious. There are men who from the force and sweetness of their personality and the loftiness of their outlook are radiating centers of goodness to all about. Most men in their younger years have come into contact with such personalities; personalities whose moral influence has been a lasting one on those with whom they have come in contact. The appeal of these men, exercised as it often is year after year upon the hundreds of men who pass through the college, is a power which only those who have experienced it can appreciate. Unfortunately, men who have the power to influence masses are not common, but all institutions have connected with them as teachers, administrators, or undergraduates, men who in their own way and in their own degree possess some measure of it. They are the invaluable members of the

college community; to be kept in the circle at all cost, for through them alone can the influence of high ideals and high character be transmitted.

After all, we come back to the idea of the development of the intellect as the conscious purpose of the college: other results may be gained and will be gained, but they must be "by-products," and not the direct aims of the institution. So far the problem has been fairly simple. But when we ask the question, assuming the purpose of the college to be thus correctly defined, In what measure does the institution meet the test? the answer is far from satisfactory.

Let us ask ourselves a series of questions.

The president and administrative officers, from their position, are best able to look at the institution as a whole. Do they sufficiently emphasize the purpose of the college? Do they impress on all connected with the institution the necessity of the subordination of its individual branches for the attainment of that purpose?

Do the alumni recognize the true purpose of the college? Do they regard their own undergraduate course as satisfying that purpose? Do they urge a correct understanding of it on those who are entering their college career?

Do students as a class ever seriously consider what the college should really give them?

Do parents, before sending sons to college, weigh the fundamental purposes of the institution? Do they try to form an estimate of how well such purposes are carried out? Do they consider whether such purposes fit the needs of their own boys?

Are members of college faculties interested in education, as distinguished from training in their individual specialties? Do they think of the college as an institution with a definite purpose; if so, do they mold their own teaching to the best carrying out of that purpose?

It may be that an institution exists in which all the questions in this list can be answered in satisfactory fashion. I have not, however, found such a college. It is certainly true that in all colleges some parts of the test would be found to be satisfactory. Otherwise, the situation would be hopeless indeed. But it seems evident that much of the criticism of the college is based upon the failure of its component parts to recognize what its purpose really is, or if that purpose is recognized, to fail to act intelligently toward its attainment. The body of this report will therefore be an attempt to estimate the extent of this failure, and to suggest directions in which remedy may be sought.

—Leon B. Richardson: *A Study of the Liberal College, a Report*

The following brief extract from the charge to a jury by Judge Benjamin R. Curtis in the United States Circuit Court for the District of Massachusetts in 1851 is an example of the common legal acceptation of the term "murder." It is very closely allied as you will notice to the interpretation. In this case, it is the setting forth of a legal principle to govern the jurors in their deliberations on the evidence that has been presented at the trial.

MURDER

. . . It is essential to the crime of murder that the killing should be from what the law denominates "malice aforethought," and the government must prove this allegation; but it is not necessary to offer evidence of previous threats, or preparation to kill, or that there was a previously premeditated design to kill. These things, if

proved, would be evidence of malice, and proof of this kind is one of the means of sustaining the allegation of malice. But, besides this express evidence of what is called in the law "express malice," malice may be also inferred or implied from the nature of the act of the accused. If a person, without such provocation as the law deems sufficient to reduce the crime to manslaughter, intentionally inflicts, with a dangerous weapon, a blow calculated to produce, and actually producing, death, the law deems the act malicious, and the offense is murder. The law considers that the party meant to effect what was the natural consequence of his act; that, if the natural consequence of his act was death, he meant to kill, and, if he so intended, in the absence of such provocation as the law considers as sufficient to account for that intent, from the infirmity of human passion, then it is to be inferred that malice existed, and from that feeling the act was done. In other words, the intention to kill unlawfully, without sufficient provocation, is a malicious intention, and, if the intent is executed, the killing is, in law, from malice aforethought, and is murder.

—Benjamin R. Curtis: *U. S. vs. James McGlue*, 1851

Frequently instead of definition, as the term has been considered up to this place, it becomes desirable to make a distinction between the meanings of a pair of words that are similar in meaning or that are frequently confused in the minds of the ordinary reader and speaker. In these instances comparison and contrast, often accompanied by illustrative material, are employed by the writer.

Of this character is the following brief extract from the message to the legislature of Governor

Gifford Pinchot of Pennsylvania in which he transmits the report of the Giant Power Survey Board.

GIANT POWER *VERSUS* SUPER-POWER

Giant Power and super-power are as different as a tame elephant and a wild one. One is the friend and fellow worker of man—the other, at large and uncontrolled, may be a dangerous enemy. The place for the public is on the neck of the elephant, guiding its movements, not on the ground helpless under its knees.

Giant Power seeks the cheapest sources of power, and hence the cheapest rates. It proposes to create, as it were, a great pool of power into which power from all sources will be poured, and out of which power for all uses will be taken. It is the pooling of supply—not the disposal of surplus—and the chief idea behind it is not profit but the public welfare.

Super-power, on the other hand, is the interchange of small quantities of surplus power at the ends of the distribution wires of each system. Its principal object is profit for the companies—not benefit for the public—and it is on the way to being realized with a rapidity which it is difficult fully to understand. If we are to have Giant Power instead of super-power the time in which to make sure of it is very short.

The main object of the super-power idea is greater profit to the companies. The main object of the Giant Power idea is greater advantage to the people. Giant Power will assure vastly better service and vastly cheaper rates to the consumer, and through effective public regulation, it will set aside the threat of the most dangerous monopoly ever known.

David Masson in discussing the terms Romance and Novel in his study, *British Novelists and Their Styles*, points out the distinction that is usually made between the two terms.

ROMANCE AND NOVEL

A Romance originally meant anything in prose or in verse written in any of the Romance languages; a Novel meant a new tale, a tale of fresh interest. It was convenient, however, seeing that the two words existed, to appropriate them to separate uses; and hence, now, when we speak of a Romance, we generally mean "a fictitious narrative, in prose or verse, the interest of which turns upon marvelous and uncommon incidents"; and, when we speak of a Novel, we generally mean "a fictitious narrative differing from the Romance, inasmuch as the incidents are accommodated to the ordinary train of events and the modern state of society." If we adopt this distinction, we make the prose Romance and the Novel the two highest varieties of prose fiction, and we allow in the prose Romance a greater ideality of incident than in the Novel. In other words, where we find a certain degree of ideality of incident, we call the work a Romance.

Although it is true that in making the distinction between the terms Romance and Novel, other considerations than those mentioned by Professor Masson should be noted, nevertheless, for the purpose of this present volume, the extract does point out the method that may be employed in explaining the distinction that exists between two words.

EXERCISES

I. Define and illustrate any one of the following terms. Any method of definition that has been illustrated in the preceding pages may be employed. After you have defined the term by one of the methods illustrated, try to write another definition in which some other method is used.

Honor	Value	Worry
Poetry	Heroism	Society
College	Education	Religion
Romance	Democracy	Honesty
Charity	Hoodlums	Citizenship
Socialism	Snobbishness	False Shame
Scholarship	Technical School	Trade School
Square Deal	Municipal Ownership	Railway Pooling
College Slang	True Sportsmanship	College Spirit
The Idle Rich	Vocational Guidance	Yellow Journalism

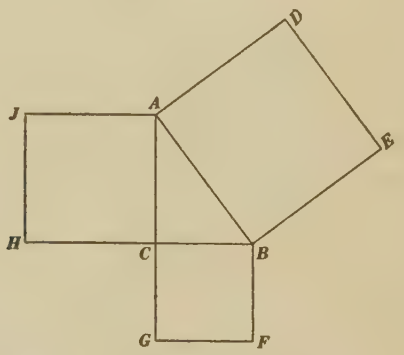
II. Very often it is desirable to make a distinction between two words that are commonly thought to be similar. By contrast and comparison, as well as by numerous illustrations, we make plain the distinction between them. Select any group of words and carefully discriminate between the words in that group.

Wit and Humor	Learning and Knowledge
Truth and Fact	Comfort and Luxury
News and Gossip	Salary and Wages
Work and Exercise	Genius and Talent
Sentiment and Feeling	Teaching and Tutoring
Fame and Notoriety	Charity and Almsgiving
Fancy and Imagination	Culture and Education

CHAPTER IX

The Statement of a Problem

Every school boy or girl who has had even a smattering of geometry will recall that there are four parts in the solution of every geometrical proposition or theorem: (1) the theorem itself; (2) the statement of what is given and what is to be proved—or, as we shall call it, the statement of the problem; (3) the proof; and (4) the conclusion, or the Q.E.D. Look for a moment at the famous Pythagorean theorem, known commonly as the Forty-seventh Proposition of Euclid:



Theorem: The square described on the hypotenuse of a right triangle is equal to the sum of the squares of the other two sides.

Statement of the problem: Given the right triangle *A B C* with squares described on the three sides and lettered respectively *A D E B*, *B F G C*, and *C H J A:* to prove that the area of the square *A E* is equal to the area of the square *B G* plus the area of the square *C J*.

In this brief quotation are contained the first two parts mentioned in the first paragraph. The statement following the figure is the simplest statement of a problem that can exist. Notice that it merely states the facts as they are illustrated in the figure and then translates the theorem into perfectly obvious and simpler terms. With such a statement, one cannot mistake the nature of the problem and the proposition that is to be solved. It is to be noticed that here as elsewhere the statement of the problem is primarily an analysis of the situation presented for solution. Here the figure had to be studied with care so that the nature of the matter to be proved might be readily apparent.

What is true of this simple case is true of every other case that can be considered.

Suppose that the problem were the finding of an adequate water supply for a city. The investigation would consider first the location of the city in order to ascertain whether it was on high or low ground. It would then seek to find the nearest available water courses. After these matters had been ascertained, it would be necessary to learn the size of the city, both in regard to area and population.

Next would be investigated the industries of the place, their possibilities of development and, consequently, their increasing demand on the water supply. The nature and adequacy of the fire protection of the place would then have to be examined. After the demands that would be made on the water supply were known, it would then be necessary to look into the various sources of supply. The chemical constituents of the water available, its purity, the possibilities of removing any impurities by filtration, the constancy, size, and continuity of the flow of the water from the sources of supply, the distance that it would have to be transported and the cost of such transportation, all these matters at least would have to be investigated. A full statement of the problem of an adequate water supply for a city would include a report on all these points.

If you will examine carefully each statement made in the preceding paragraph you will observe that not one of these statements involves argument. Each calls merely for a statement of fact—for a recital of those items of information that have been gathered by an impartial examination of the conditions observable in the particular locality that has been investigated.

When the facts have been presented in the report, then follow the suggestions of the investigator. These suggestions may be of two sorts: they may be a critical examination of the available methods of

procedure based on the findings of the investigators, or they may be an argument for the adoption of one plan of action rather than another. If they are critical, they become expository and the methods pursued in their presentation have already been discussed in the chapter on criticism. If, however, they are argumentative, this volume is not concerned with them.

Engineering reports that have to do with the investigation of possible ways in which water supply may be increased, railroads relocated, bridges built, and tunnels constructed almost always contain a large section that does nothing but set forth clearly the problem to be solved. It is not to be supposed, however, that the usefulness of this form of expository writing is confined to the engineering field. No field of activity or realm of thought, exists in which problems are not constantly being presented for solution. In every case, before the problem can be solved, its nature must be fully understood. The ability, therefore, to see a problem clearly and to state it explicitly is an indispensable qualification of all persons who endeavor to understand new ideas and who seek to better present conditions.

Just at present, in the field of economics, many interesting problems are being considered. The following illustration is a good example of the way in which one of the problems that is confronting the economist has been presented:

THE POTENTIAL SUPPLY OF WHEAT *

The spread of wheat production during the past century across the virgin and fertile prairies of the United States and Canada, Argentina and Australia, Russia and Siberia is a romantic and fascinating story, but its profound significance has not been fully apprehended. Hundreds of ponderous tomes have been written about the Industrial Revolution in western Europe and eastern North America, which ushered in our modern civilization and has been considered its basis; but scarcely a volume has described the Agricultural Revolution in eastern Europe and western North America, which transformed the grass lands and supplied the food and fibers that made the Industrial Revolution possible.

Prior to the nineteenth century, agricultural settlement in Europe and North America had been confined by geographic conditions largely to originally forested lands. The forests supplied fuel and building material, and the ever-running streams that are found in forest areas provided drink for man and beast. Most of the grass lands of these continents were grazing grounds for nomads—Hungarians, Turkomans, and Tartars in southeastern Europe, Indians, and later cattlemen and sheepmen in western North America. The lack of wood and water prevented the utilization of these grass lands for agriculture and the establishment of civilization. When Malthus wrote his famous essay a century and a quarter ago, predicting that in the occidental world, as in the oriental, population would soon press upon the food supply, and be limited by war, famine, and pestilence, only a small part of the vast prairies and steppes of southern and southeastern Russia had been broken for wheat; the Hungarian Plain was still mostly a verdant pasture,

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divided into the large estates of nobles and cattle kings; the prairies and plains of central and western North America had not yet been crossed by a white man; the pampas of Argentina were an unmapped wilderness; and only a fringe of land along the coast of Australia had been explored.

The utilization of these grass lands of the world for grain, supplemented by the use of animal manures and mineral fertilizer on some of the forest soils, has provided for an increase of population in Europe during the past century and a quarter from 200,000,000 to over 450,000,000, and in the United States and Canada from 6,000,000 to over 120,000,000. Moreover, fully half of these 570,000,000 of people were, before the recent war, enjoying a standard of living fully twice as costly as that permitted their ancestors a century ago.

Three great inventions account in large measure for the agricultural development of these grass lands and the marvelous and unprecedented increase in population and wealth which has followed: (1) the invention of well-drilling appliances, (2) the development of grain-harvesting and threshing machinery, and (3) the invention of the steam locomotive and construction of railways. Wells gave water to the trackless wastes, grain-harvesting machinery enabled one man to do the work of ten, and the railroads brought wood and coal to the settlers and provided cheap and rapid transportation to market for their grain and products.

The Food Problem of the Future

Today we are at another critical period in the history of the occidental world, much like that existing in England when Malthus wrote his famous essay, but vaster in its significance. In eastern Europe, in western North America, in Argentina, in Australia, almost everywhere in

the temperate zones, the rising waves of population are beating against the barriers of adverse physical conditions all along the shore line of settlement. Only in Siberia does there appear to remain any large amount of arable land yet unutilized for crops outside the tropics; and if the arable land of Siberia were parcelled out among the peasants of Russia each would have an allotment probably less than half that held by the average farmer in the United States. There rises before the eyes of intelligent men today the same vision that rose before the eyes of Malthus—a vision of human misery and degradation like that among the peoples of the Orient for centuries past.

How is the western world to avoid this impending disaster? Will the twentieth century witness the agricultural exploitation of the tropics, like that of the grass lands of the temperate zones during the nineteenth? Or will the greatly increased use of fertilizers, the prevention of plant diseases, the more careful cultivation of the crops, permit the utilization for wheat and other crops of the poorer lands now in pasture or forest or lying idle, and also cause such an increase in the yield per acre of the lands already in cultivation as will meet the needs of the more numerous population? Or will the decline in religious authority and development of materialism diminish the birth rate, possibly even induce depopulation eventually, as it did, apparently, in the ancient Roman Empire? Or will recurring wars keep the population comfortably within limits set by our agricultural resources?

These are questions that no one can answer, but they clearly indicate that the time is at hand when the leaders of the white race should take stock of the agricultural resources of the lands they hold and of the trend of population, and decide upon both a land policy and a population policy, lest the poverty, disease, and political disin-

tegration that characterize many of the overpopulated and undercapitalized countries of the Orient come upon us also.

The purpose of this paper is to encourage the making of such a survey of agricultural resources. The estimates that are given are only tentative, indeed, most of them can be little more than guesses.

Wheat the White Man's Food

Wheat, supplemented in certain European countries by rye, contributes from one quarter to one half of the fuel value of the food eaten by the white peoples of the world. Just as rice characterizes the diet of the yellow race, and corn or manioc is the usual fare of the black race, so wheat may justly be called the white man's food. The cause, no doubt, is partly traditional, partly climatic, since the white people hold the lands having the best wheat climates, but it is also partly economic.

Wheat is the most expensive of the great cereals, except rice. The white man is rich, at least in the United States, the British Commonwealth, and much of western Europe, whereas the other peoples of the world are poor. Although the white race possesses 70 per cent of the cultivated land of the world, and even a larger proportion of the land suitable for wheat, it comprises only 40 per cent of the world's population. In other words, the white race possesses over three times as much cultivated land per person as the other races of the world, and probably four times the per capita area of land suitable for wheat. Moreover, the white race possesses most of the coal, the iron, and the mineral oil of the world, of which the products can be exchanged for wheat when needed.

Yet nearly one third of the white race cannot afford wheat bread except on festive occasions. For about 150,000,000 people of northeastern Europe rye is the staff

of life, and nearly 50,000,000 more in Mediterranean countries and southeastern Europe depend largely on corn for their sustenance. It is only the more prosperous of the white race—the Anglo-Saxon peoples, the French, some of the Italians, Hungarians, and Roumanians, and the more fortunate of the Teutons and Slavs, who enjoy without stint the luxury of the wheaten loaf.

The Trend of Population of the Principal Wheat-Eating Peoples

The problem reduces itself, therefore, to determining whether wheat can be provided in the future for these more fortunate portions of the white race, or whether they, too, will be forced gradually to rely on corn, barley, rice, and other crops that produce more food per acre. The first step, obviously, is to estimate the numbers of the Anglo-Saxon, French, Italian, Hungarian, Roumanian, Teutonic, and Slav peoples twenty-five, fifty, and one hundred years hence. This is a task for the demographer rather than the geographer, but since the former has failed to do it, the geographer must venture upon the very slippery path of population prediction.

The population of the Anglo-Saxon nations, including the United States, is increasing at present at the rate of about 1.3 per cent a year. It appears, however, that as population increases, the rate decreases. The increase is approximately stationary at about 2,100,000 a year, two thirds in the United States, one third in the British Empire. The Anglo-Saxon nations, therefore, may be estimated to have 225,000,000 white people twenty-five years hence, possibly 275,000,000 fifty years from now, and, perhaps 375,000,000 a century hence, as compared with the 175,000,000 of today.

The population of France is stationary at about 40,000,000. That of Italy was increasing before the war about

200,000 a year, which would indicate an increase from the 40,000,000 at present to possibly 60,000,000 a century hence. Hungary and Roumania include nearly 26,000,000 people, and are increasing over one per cent a year. These countries may number 60,000,000 people a hundred years hence.

In Germany, the population, except during the war years, has been increasing about 800,000 a year, in the Scandinavian countries nearly 100,000 yearly. Austria, the Netherlands, and German Switzerland are increasing fully 100,000 yearly. The increase in population of the Teutonic peoples, therefore, may be estimated roughly at a million annually. As there are now about 100,000,000 Teutons in Europe, this rate of increase would indicate 125,000,000 twenty-five years hence, 150,000,000 in fifty years, and 200,000,000 after a century. But as over 60 per cent of these Teutonic peoples live on rye rather than wheat, we need include in our estimate of wheat-eating peoples a century hence only 80,000,000 Teutons.

The statistics of population of the Slavic and adjacent peoples are less trustworthy, but according to official figures the population of the Russian Empire increased from 74,000,000 in 1859 to 129,000,000 in 1897, and to 178,000,000 in 1914. This increase of 50,000,000 people, or about 40 per cent, in the seventeen years from 1897 to 1914 is no greater in rate than that during the early decades of our own national development; but it is very unlikely, after the scars of war are healed and the present economic experiments are completed, that population in both European and Asiatic Russia can continue to increase at any such rate for a century. So little is known of the situation in Russia that prediction of the future population becomes difficult, if not impossible; but let us assume, as a basis for discussion, that it will increase in the next century as much as it has in the past century, or about

135,000,000. A century hence the population of Russia, the Baltic States, the portion of Poland formerly part of Russia, and Bessarabia may be estimated, therefore, at about 300,000,000; but, since about half of these Slavic peoples now live on rye rather than wheat, for the purpose of this discussion we should include in our wheat-eating Slavic peoples a century hence only 150,000,000.

This leads to a very rough estimate that the number of that portion of the white race accustomed to eating wheat will increase from 400,000,000 at present to about 500,000,000 twenty-five years hence, 600,000,000 in fifty years, and 800,000,000 after a century. Nearly half of this population will live in the Anglo-Saxon countries.

The Future Need for Wheat

The per capita consumption of wheat among the wheat-eating countries varies considerably. Bread probably contributes a smaller proportion of the diet in the United States and Great Britain than in any other important country inhabited by the white race. Widespread prosperity has permitted the partial substitution of a multitude of other foods. The annual per capita consumption of wheat, excluding seed and exports and including imports, for the pre-war period, 1909–1913, was about 5.8 bushels in the United States and also in Great Britain, 6.4 bushels in Italy, 8.4 bushels in France, 3.33 bushels in Germany, to which may be added 6.7 bushels of rye, and 3.1 bushels in Russia, to which may be added 5.5 bushels of rye.

If the per capita consumption of wheat, excluding seed, among these peoples remains the same as today, the Anglo-Saxon nations will need 1,300,000,000 bushels of wheat twenty-five years hence, 1,600,000,000 bushels fifty years hence, and 2,200,000,000 bushels after a century, as compared with 1,000,000,000 bushels today. The other

wheat-eating peoples mentioned will need 1,900,000,000 bushels, excluding seed, twenty-five years hence, 2,275,000,000 fifty years hence, and 3,025,000,000 after a century, as compared with 1,525,000,000 bushels today. The total requirement of these people, after allowance is made for seed, will be 4,300,000,000 bushels fifty years hence, and 5,800,000,000 bushels a hundred years hence.

If the average per capita consumption of the Anglo-Saxon and the other white wheat-eating peoples should increase to that of France today, which is very likely as the consumption of more expensive food declines, the total requirement of these people, including seed, will become 5,500,000,000 bushels fifty years hence, and 7,400,000,000 bushels a hundred years hence. Can the white man's world almost treble its production of wheat within a century, or even produce the 5,500,000,000 bushels which it appears may be needed within the lifetime of some of us? If so, from where and how? These questions involve consideration of the physical and economic conditions which affect the production of wheat.

—O. E. Baker: *Economic Geography*, March, 1925

In the investigation of any matter, the investigator must seek to know, first, all the available facts about the matter at issue. He must then seek to ascertain the nature and the extent of the obstacles to be overcome. Finally, he must lay down the accepted methods of solving the problem. These, in general, are the matters to be considered in the statement of problems. Such expositions require, first, ability to observe closely all conditions; and, second, the ability to state these conditions clearly, coherently, and concisely.

The chemist, the physician, the economist, the social worker must all proceed in this fashion. The lawyer retained on a case must first gather all the data available on both sides of the question in dispute. Then, with the facts before him, he must determine the points of law involved and the questions of fact that need to be presented to solve the problem. Thus he arrives at the issues in the case and at the statement of what must be proved and what disproved in order that he may win the case. This is the "statement of the problem" for him.

The legislator who wishes to address a legislative body on a bill, or a debater who wishes to defend a proposition, must proceed in a similar way. In both cases it is necessary, first of all, to arrive at an understanding of the question under discussion. The statement of the problem, then, is the first step in all argument. It presupposes a complete investigation of the proposition to be argued and the statement is only possible when a complete study of the pros and the cons of the question has been made. It is always a statement of facts, and only of facts.

In books dealing with argumentation the matter that is usually included in the introduction to the argument is what has been called here "the statement of the problem." Such introductions include the following matters, all of which, it will be noted, are matters that have already been included in the expository type under discussion in this chapter.

First, a statement of the proposition is given. Then, in order that the proposition may be fully understood, there follows a definition of those words and terms that need elucidation. When this has been done, it is usually desirable to restate the proposition, substituting the simpler definitions that have been given for the terms used in the original proposition. A reference to the geometrical theorem given at the beginning of this chapter will disclose that this was the method used in that simple case. With the meaning of the proposition made clear, there are certain matters that need to be explained. The extraneous matters to be omitted from the discussion must be pointed out so that there will be no danger that the discussion will be sidetracked. Sometimes historical data or enveloping circumstances need to be set forth. When all these matters have been presented, it remains only to state those fundamental considerations that we call the issues of the proposition, those questions that must be answered affirmatively or negatively in order to prove or disprove the main question.

It will be noticed that all the matters set forth as the parts of the introduction to an argument are those about which no question exists. They are matters that are to be found in the investigation of the proposition, whether the proposition is true or false. They are indisputable—the statement of them is exposition and not argument. They must be set forth if a satisfactory argument is to result.

Without them, argument often becomes mere contentiousness and talk.

The following selection is a satisfactory introduction to an argument and, therefore, a good statement of a problem:

TACOMA LAND BILL

Mr. Chairman: This bill (H. R. 7019) which I shall ask this House to pass today is one of that general class usually called "private bills"; and while the usage of this House might catalogue it under that head, it is in reality a "public bill," because it has to do with the interests of many people—indeed, an entire city of 75,000 population.

This bill provides that the legal title to a certain tract of land situated near the city of Tacoma, the title to which is now in the United States Government, shall be transferred to the city of Tacoma.

However, I wish to assure this House that as a matter of fact the Government practically loses nothing by the passage of this bill. I realize that these two statements placed side by side seem to involve a contradiction. Therefore I will make a brief explanation of this matter.

Since the year of 1866 the Government has owned a tract of land adjoining what is now the city of Tacoma; this tract of land contains 637.9 acres. In the year of 1888 the Government gave the city of Tacoma a right or license to use and occupy this land as a city park, but retained the legal title in the Government, because it was thought that at some future time the Government might need to use and occupy this land for military purposes. Therefore you will observe that the present condition of the title to this land is that the legal title is in the Government, with the right in the city to use and occupy the same. This bill, if it shall pass, will simply reverse

and place the legal title to this land in the city of Tacoma, with the right remaining in the Government for all time to come to take possession or use and occupy any or all of this land that it might need for military, naval, or light-house purposes.

I wish to explain briefly to this House why the passage of this bill and this change in the title is not only fair and just, but the failure to pass this bill would, in my judgment, be very unfair to the 75,000 people in the city of Tacoma.

—Francis W. Cushman: Speech in the House of Representatives, February 28, 1905

EXERCISE

Each of the following subjects contains a real problem. The student should endeavor to state clearly that problem. He should remember that in such compositions argument has no place. No facts should be permitted to enter into the composition that are not fully accepted by all who may discuss any phase of the subject.

India
Mexico
Unionism
The Negro Problem
The Alien Problem
Disease Prevention
Liberty of Thought
Increased Armaments
Collective Bargaining
The Setting of Prices
The Commercial Airplane

The Non-Fraternity Men
Reciprocity with Canada
The Water Supply at ——
Intercollegiate Athletics
The Housing Problem of ——
Elective Studies in College
Taking Care of the Freshmen
Electrification of Railroads
The Eating-House Problem at ——
The Japanese-Chinese Problem
The Border Problem in Ireland
Overcrowding in Large Cities
High Prices of Needed Articles
The Industrial Status of Women
The English Self-Governing Dominions
The Problem of the Prevention of Tuberculosis
The United States and the League of Nations
The Problem of Medical Inspection in Schools
Selection of Books for a Small-Town Library
Government Ownership of Railways (Telegraphs or Telephones)

CHAPTER X

Reports

The report is an exposition of the findings of an investigator. It is an attempt to set down faithfully the findings obtained in making the investigation. If it contains argumentative material, that material follows the statement of facts and is always based on principles that are the standardized principles for judging the particular sort of matter contained in the report. The essential part of the report, however, so far as this volume is concerned, is that part that contains the findings of the investigator.

A report may be a statement of the results of an experiment. It may be a complete or summarized statement of the findings of a commission or of an expert. It may be the analysis of widespread reading on a given subject. In every case the report calls for a clear appreciation of the subject being investigated, a knowledge of the matters pertinent to the matter that is to be reported on, a searching analysis of the facts gathered, and a definite statement of the findings.

In general, reports may be divided into three classes:

(1) Research report
(2) Technical report { Recommendations / Research problems / Routine work }
(3) Lecture or reading report

Research Report. Under this heading are included all of those highly scientific reports that record the results of experimentation. Scientific and medical journals are filled with them. They are often highly technical in language and often extremely theoretical. The method pursued in their preparation, however, does not differ at all from the method pursued in any of the others. In each case it is necessary to state the problem involved in the experiment, to set forth with care the preparations that have been made for the carrying out of the experiment, to state accurately and clearly the observed phenomena of the experiment, and finally to gather together and compile with care the results of the experiment.

The following example illustrates the nature of such a report:

EXPERIMENTS IN MAGNETISM

(Note. The numbering of the paragraphs that is found in Faraday's volume has been kept in this extract.)

24. ii. *Magnetism.*—Voltaic electricity has most extraordinary and exalted magnetic powers. If common electricity be identical with it, it ought to have the same powers. In rendering needles or bars magnetic, it is found to agree with voltaic electricity, and the *direction*

of the magnetism, in both cases, is the same; but, in deflecting the magnetic needle, common electricity has been found deficient, so that sometimes its power has been denied altogether, and at other times distinctions have been hypothetically assumed for the purpose of avoiding the difficulty.

25. M. Colladon, of Geneva, considered that the difference might be due to the use of insufficient quantities of common electricity in all the experiments before made on this head; and, in a memoir read to the Academie des Sciences in 1826, describes experiments, in which, by the use of a battery, points, and a delicate galvanometer, he succeeded in obtaining deflections, and thus establishing identity in that respect. MM. Arago, Ampere, and Savary, not having themselves published (that I am aware of) their admission of the results, and as some have not been able to obtain them, M. Colladon's conclusions have been occasionally doubted or denied; and an important point with me was to establish their accuracy, or remove them entirely from the body of received experimental research. I am happy to say that my results fully confirm those by M. Colladon, and I should have had no occasion to describe them but that they are essential as proofs of the accuracy of the final and general conclusions I am able to draw respecting the magnetic and chemical action of electricity.

26. The plate electrical machine I have used is fifty inches in diameter; it has two sets of rubbers; its prime conductor consists of two brass cylinders connected to a third, the whole length being twelve feet, and the surface in contact with air about 1422 square inches. When in good excitation, one revolution of the plate will give ten or twelve sparks from the conductors, each an inch in length. Sparks or flashes from ten to fourteen inches in length may easily be drawn from the conductors. Each

turn of the machine, when worked moderately, occupies about four fifths of a second.

27. The electric battery consists of fifteen equal jars. They are coated eight inches upward from the bottom and are twenty-three inches in circumference, so that each contains 184 square inches of glass, coated on both sides; this is independent of the bottoms, which are of thicker glass, and contain each about fifty square inches.

28. A good *discharging train* was arranged by connecting metallically a sufficiently thick wire with the metallic gas pipes of the house, with the metallic gas pipes belonging to the public gas works of London, and also with the metallic water pipes of London. It was so effectual in its office as to carry off instantaneously electricity of the feeblest tension, even that of a single voltaic trough, and was essential to many of the experiments.

29. The galvanometer was one or the other of those formerly described,* but the glass jar covering it and supporting the needle was coated inside and outside with tin foil, and the upper part (left uncoated, that the motions of the needle might be examined) was covered with a frame of wirework having numerous sharp points projecting from it. When the frame and the two coatings were connected with the discharging train (28), an insulated point or ball, connected with the machine when most active, might be brought within an inch of any part of the galvanometer, yet without affecting the needle within by ordinary electrical attraction or repulsion.

30. In connection with these precautions, it may be necessary to state that the needle of the galvanometer is very liable to have its magnetic power deranged, diminished, or even inverted by the passage of a shock through

* A long footnote that it is not necessary to insert here is appended to the exposition at this point. In it is described in detail the kind of galvanometer that Faraday used.

the instrument. If the needle be at all oblique, in the wrong direction, to the coils of the galvanometer when the shock passes, effects of this kind are sure to happen.

31. It was to the retarding power of bad conductors, with the intention of diminishing its *intensity* without altering its *quantity*, that I first looked with the hope of being able to make common electricity assume more of the characters and power of voltaic electricity, than it is usually supposed to have.

32. The coating and armor of the galvanometer were first connected with the discharging train; one end of the galvanometer wire was connected with the outside coating of the battery, and then both these with the discharging train; the other end of the galvanometer wire was connected with a discharging rod by a wet thread four feet long; and finally, when the battery (27) had been positively charged by about forty turns of the machine, it was discharged by the rod and the thread through the galvanometer. The needle immediately moved.

33. During the time that the needle completed its vibration in the first direction and returned, the machine was worked and the battery recharged; and when the needle in vibrating resumed its first direction, the discharge was again made through the galvanometer. By repeating this action a few times, the vibrations soon extended to above 40 on each side of the line of rest..

34. This effect could be obtained at pleasure. Nor was it varied, apparently, either in direction or degree, by using a short thick string, or even four short thick strings in place of the long fine thread. With a more delicate galvanometer, an excellent swing of the needle could be obtained by one discharge of the battery.

35. On reversing the galvanometer communications so as to pass the discharge through from the second one men-

tioned above to the first, the needle was equally well deflected, but in the opposite direction.

36. The directions were in the same direction as if a voltaic current had been passed through the galvanometer, *i.e.*, the positively charged surface of the electric battery coincided with the positive end of the voltaic apparatus, and the negative surface of the former with the negative end of the latter.

37. The battery was then thrown out of use, and the communications so arranged that the current could be passed from the prime conductor, by the discharging rod held against it, through a wet string, through the galvanometer coil, and into the discharging train, by which it was finally dispersed. This current could be stopped at any moment, by removing the discharging rod and either stopping the machine or connecting the prime conductor by another rod with the discharging train; and could be as instantly renewed. The needle was so adjusted that, whilst vibrating in moderate and small arc, it required time equal to twenty-five beats of a watch to pass in one direction through the arc, and of course an equal time to pass in the other direction.

38. Thus arranged, and the needle being stationary, the current, direct from the machine, was sent through the galvanometer for twenty-five beats, then interrupted for another twenty-five beats, renewed for twenty-five beats more, again interrupted for an equal time, and so on continually. The needle soon began to vibrate visibly and, after several alternations of this kind, the vibration increased to 40 or more.

39. On changing the direction of the current through the galvanometer, the direction of the deflection of the needle was also changed. In all cases the motion of the needle was in a direction the same as that caused either by the use of the electric battery or a voltaic trough.

40. I now rejected the wet string and substituted a copper wire, so that the electricity of the machine passed at once into the wires communicating directly with the discharging train, the galvanometer coil being one of the wires used for the discharge. The effects were exactly those obtained above (38).

41. Instead of passing the electricity through the system, by bringing the discharging rod at the end of it into contact with the conductor, four points were fixed on to the rod; when the current was to pass, they were held about twelve inches from the conductor, and when it was not to pass they were turned away. The galvanometer operating as before (38), except with this variation, the needle was soon powerfully deflected, and in perfect consistency with the former results. Points afforded the means by which Colladon, in all cases, made his discharges.

42. Finally, I passed the electricity first through an exhausted receiver, so as to make it there resemble the aurora borealis, and then through the galvanometer to the earth; and it was found still effective in deflecting the needle, and apparently with the same force as before.

43. From all these experiments, it appears that a current of common electricity, whether transmitted through water or metal, or rarified air, or by means of points in common air, is still able to deflect the needle; the only requisite being, apparently, to allow time for its action; that it is, in fact, just as magnetic in every respect as a voltaic current, and that in this character therefore no distinction exists.

44. Imperfect conductors, as water, brine, acids, etc., etc., will be found far more convenient for exhibiting these effects than other modes of discharge, as by points or balls; for the former convert at once the charge of a powerful battery into a feeble spark discharge, or rather con-

tinuous current, and involve little or no risk of deranging the magnetism of the needles.

—Michael Faraday: *Experimental Researches in Electricity*

The Technical Report. The technical report is usually the result of investigations carried on for the purpose of adding to the knowledge of the field with which the report is concerned or for the purpose of making recommendations for the conduct of some specific project. Sometimes, however, the report is merely a matter of routine, and in such cases the manner and form which it takes is precisely designated by the firm or corporation for which it is intended. This text, therefore, is not concerned with the routine report. What follows, although it applies to this sort of document, is mainly concerned with the research and recommendation reports.

Requirements of Reports. Reports should contain more than a tabulation of actual data and statements of cold facts and figures. Reports should be readable, coherent, and interesting. Unless they possess these qualities, they generally fail to accomplish the intent of their writers: the adoption of the suggestions they contain. Frequently, reports on technical questions must be submitted to laymen for the adoption of the recommendations they contain, because most often it is laymen that furnish the funds for carrying into practice the project they advocate. Consequently such reports must be readily intelligible and interesting to those who read them.

The development of an oil field, the building of a bridge, the construction of a dam, the planning of a city, and the securing of an adequate water supply for a town are some of the matters on which reports are prepared and submitted to business men or legislative bodies for approval. The experience of engineers has shown that the actual writing of reports is of at least as much importance as is the collection of the data upon which they are based. The engineer must realize that in his business he must deal with men as much as he deals with materials, theories, and figures. He must, therefore, know the methods by which men are influenced and convinced, and his reports must exemplify his knowledge.

Furthermore, the writer of the technical report must realize that absolute integrity is an indispensable requirement of all report writing. He must avoid being unduly influenced by any preconceived ideas he may have had on the subject he is investigating. He must view everything he examines with unprejudiced mind and with eyes open to all pertinent facts. Herein lies one of the great difficulties that beset the experimenter and the investigator. It is so easy to start out on a piece of work with a definite thesis in mind and to close one's eyes to those facts that seem to disprove that thesis. I recall reading a thesis on the stage of Shakespeare in which a worthy German scholar set out to prove that scenes on that stage alternated between the back stage and the front stage. So

intent was he on proving his original idea that he selected only those plays in which there seemed to be reason to believe that the presentation was after this fashion. He neglected entirely those other plays that did not prove his point. Facts should always be considered in their entirety and all that is pertinent to the discussion should have a place. Facts should never be twisted to accord with personal opinions and previous ideas. Personal opinions and preconceived notions should be governed by the facts and not the facts by the ideas and notions.

Reports are often rendered more intelligible and interesting by drawings and photographs. Such devices stimulate the imagination and add a personal interest in, and an acquaintanceship with, the matter under discussion because of the visual knowledge these devices lend to it.

It is also necessary that absolute clarity be sought in the presentation of the material of the report. Abstruse mathematical data, as well as complicated theoretical reasoning, should be avoided. In their place the report should represent graphically, if possible, the conclusions reached through the solving of the problem that has been investigated. It is difficult even for the expert to follow easily the solution of a mathematical problem by another. The expert usually prefers to do the mathematical and theoretical proving himself after he has been "sold" on the essential ideas that the report contains.

It does not seem necessary to include in this text

a detailed technical report of research character because of the great length and complexity that most reports of this character possess. Such documents are readily available in most technical magazines. The following examples, however, illustrate the general nature of the technical report and are sufficient for the present purpose of this book.

The following section from a very extensive report shows how a rather technical matter connected with school ventilation may be treated so that it is readily intelligible to anyone:

PROGRESS OF ARTIFICIAL VENTILATION IN THE DEVELOPMENT OF THE PHILADELPHIA SCHOOL SYSTEM

TESTS OF VENTILATING SYSTEMS. To test the general efficiency of ventilating systems as installed and operated, a series of anemometer tests were made in 118 rooms contained in 17 buildings in different parts of the city [Philadelphia].

SELECTION OF SYSTEMS FOR TEST. Great care was exercised in the selection of systems tested, to ensure results which would be average for all systems installed. Data from the general survey of the buildings and their systems aided in selecting average systems although a selection was also made from the best (Building No. 195), and from the poorest systems (Building No. 16).

The total number of rooms supplied by any type of system and included in the tests made is directly proportional to the total number of rooms in all buildings supplied by like systems. Weather—outside temperature—during the tests ranged from 35° to 47° F.; and since the United States Weather Bureau reports for a ten-year

period give the average temperature between October 1st and May 1st for Philadelphia as 40° F., it can be concluded that the results of tests of the gravity systems of ventilation, the efficiency of which depends upon the outside temperature, are average for those systems.

To counteract the effect of prevailing winds on results of tests of gravity systems, rooms on all sides of the buildings were also selected. As the velocity of air in the ducts to the upper floors of a building having a gravity system of ventilation is higher than that in the ducts to the lower floors, rooms on various floors were also selected.

Upon entering the building to make a test, the principal and the janitor or engineer were requested to keep the system operating at a normal rate and in only one instance (Building No. 303) was the system forced for the benefit of better results of the test.

Under the mechanical indirect and split steam systems the variation of air per pupil in cubic feet per minute is between 23 and 51 cubic feet of air per pupil per minute. In the gravity warm air system the variation is between 3.6 and 6 cubic feet per pupil per minute. The results achieved through the mechanical indirect and split system are such as to give evidence that this type of system should be the one provided in future construction.

Tests were not made of the efficiency of ventilating room heaters; however, previous tests on this type of system show that results similar to those found in the gravity systems are to be expected.

Natural ventilation will supply not more than 3.33 cubic feet of air per pupil per minute based on a room content of 200 cubic feet per pupil (standard requirements in modern school buildings) and one change of air per hour.

Data from the score cards show that 2.2 per cent of all classrooms are supplied with air by means of natural ven-

tilation; 45 per cent by means of gravity systems; and 52.5 per cent by means of mechanical systems.

Natural and gravity systems are unsatisfactory, as shown by experience and tests, respectively. Mechanical ventilation in 47 per cent of all rooms tested was unsatisfactory.

Applying these results to classrooms through the city it may be assumed, therefore, that the ventilation in 72 per cent of all classrooms is unsatisfactory.

A number of experimenters in recent years have shown that the matter of whether air is good or bad for schoolroom purposes depends more upon its physical than upon its chemical qualities. Among these experimenters are Kimball, "Ventilation of School Buildings," *School Board Journal*, January and February, 1915; Whipple, "Air Washing at Springfield Training School," *American Physical Education Review*, 18: 600–628; Thorndike-McCall and Chapman, "Ventilation in Relation to Mental Work"; and others. The physical qualities that seem to be most satisfactory are a humidity of roughly 50 per cent saturation, a temperature of roughly 68° F., fairly rapid circulation, and freedom from dust and body excretions.

Although a dry atmosphere is desirable for some purposes outside of school, it tends to produce restlessness in the schoolroom. While, on the other hand, a humid atmosphere, although desirable for some purposes outside, produces lassitude in the schoolroom. The best work is done, other conditions being equal, when the relative humidity is about 50, as was said above, though in very cold weather it must be lower than 40, unless the school building is kept at an even temperature throughout the whole twenty-four hours and unless the windows have double sashes. If these two conditions are not met the moisture is condensed on walls and windows.

The means of controlling the humidity are air washers

and humidifiers with humidistats. The number of schools in Philadelphia having air washers is 44. If a school cannot be provided with both air washers and humidifier with humidistat, it should be provided with the former in preference to the latter because the washer serves not only to clean the air of dust and body excretions but also humidifies in a fairly acceptable fashion without the humidistat. With the humidistat, however, the humidity is automatically controlled just as accurately as temperature is controlled by a thermostat. There is a condition that makes an apparent exception to the foregoing statement. On a warm, wet day the humidistat may prevent any artificial humidification and yet the humidity in the rooms may be higher than is desirable. However, the exception is only apparent, for likewise on a warm day the thermostat may prevent any artificial heating and yet the rooms may be unduly warm. So far as is known, no means has yet been devised for removing the moisture from the air at a cost

Approximate Relative Humidity of Air in Schoolrooms at Proper Temperature, Where No Artificial Humidification is Effected

Per Cent Relative Humidity Outside	Per Cent Relative Humidity Inside when Outside Temperature is						
	60°	50°	40°	30°	20°	10°	0°
80	62	44	31	21	14	9	6
70	54	38	27	18	12	8	5
60	46	33	23	15	10	7	4
50	39	28	19	13	9	6	4
40	31	22	15	10	7	5	3
30	23	17	12	8	5	4	2
20	15	11	8	5	3	2	1
10	8	6	4	3	2	1	1

low enough to warrant the additional expense. Until such a time it does not seem feasible for schools to install dehydrating or dehumidifying plants.

The above table should be read as follows: When the relative humidity outside the building is 80 per cent, the humidity on the inside will be 62 per cent if the outside temperature is 60; 44 per cent if the outside temperature is 50; 31 per cent if the outside temperature is 40, and so on. (Nassau County Survey, p. 59.)

To show the effect of thus raising temperatures in the schools of Philadelphia, the survey committee selected at random the first five days of February in the years 1918 and 1919 and with the weather reports of the Philadelphia station and Nassau County Survey Table, found that at noon on these days the humidity in the Philadelphia schools, wherein air washers or humidifiers were not provided, was as follows:

Relative Humidities in the Schools of Philadelphia That Had Neither Air Washers Nor Humidifiers at Noon on the First Five Days of February in Two Successive Years

Day of Month	Per Cent Relative Humidity 1918	Per Cent Relative Humidity 1919
1	17	23
2	15	30
3	31	38
4	16	31
5	6	23

Note 1. The period reported for 1918 marks much lower temperatures than the same period for 1919, hence the lower humidities at classroom temperatures.

Note 2. The published weather reports do not give the temperatures at noon; so the highest for the twenty-four hours was used on the assumption that it was registered at or near noon.

It is easily seen that when artificial humidification is not provided for, the children live in an atmosphere that is entirely too dry.

To ensure air of the quality to make children feel at their best and thus be in such a frame of mind as to derive the highest benefit from instruction, the building must be provided with good air washers and humidifiers, including humidistats, and these must be kept in good order and operated at all times when the weather is so cold that there is not free circulation of air through open windows. The air washer may also serve to cool the building during the warm months. The school authorities of Philadelphia are to be commended for providing washers in all the buildings erected in very recent years.

—Report of the Survey of the Public Schools of Philadelphia.

Although the following letter written during the World War is not in reality a technical report in the sense in which this term is usually employed, nevertheless it is of so similar a nature that it has seemed good to include it at this place, especially since the matter that it contains is of such real interest to college men.

RESERVE OFFICERS' TRAINING CAMP

War Department

The Adjutant General's Office

Washington, D. C., August 28, 1917

The President,
Penn State College,
State College, Pennsylvania

Dear Sir:

Believing it might be interesting and helpful to schools and colleges in the present emergency, I invite your atten-

tion to the following observations of the candidates at one of the reserve officers' training camps, as to the probable causes of the considerable number of rejections of candidates for reserve officers at the training camps.

Perhaps the most glaring fault noted in aspirants to the officers' reserve corps, and one that might be corrected by proper attention in our high schools, preparatory schools, and colleges, might be characterized by the general word "slouchiness." I refer to what might be termed a mental and physical indifference. I have observed at camp many otherwise excellent men who have failed because in our school system sufficient emphasis is not placed on the avoidance of this mental and physical handicap. In the work of the better government military schools of the world this slackness in thought, presentation, and bearing is not tolerated because the aim of all military training is accuracy. At military camps throughout the country, mental alertness, accuracy in thinking and acting, clearness in enunciation, sureness and ease of carriage and bearing must be insisted upon for two reasons: that success may be assured as nearly as human effort can guarantee it with the material and means at hand, and that priceless human lives may not be criminally sacrificed. Only by the possession of the qualities referred to does one become a natural leader.

A great many men have failed at camp because of inability to articulate clearly. A man who cannot impart his idea to his command in clear, distinct language and with sufficient volume of voice to be heard reasonably far is not qualified to give commands upon which human life will depend. Many men, disqualified by this handicap, might have become officers under their country's flag had they been properly trained in school and college. It is to be hoped, therefore, that more emphasis will be placed upon the basic principles of elocution in the training of

our youth. Even without prescribed training in elocution a great improvement could be wrought by the instructors in our schools and colleges, regardless of the subject, insisting that all answers be given in a loud, clear, well-rounded voice. This, of course, necessitates the opening of the mouth and the free movement of the lips. It is remarkable how many excellent men suffer from this handicap and how almost impossible it is to correct this after the formative years of life.

In addition to this physical disability and slouchiness is what might be termed the slouchiness of mental attitude. Many men fail to measure up to the requirements set for our officers' reserve because they have not been trained to appreciate the importance of thinking. Too many schools are satisfied with an approximate answer to a question. Little or no incentive is given increased mental effort to coördinate one's ideas and present them clearly and unequivocally. Insistence upon decision in thought and expression must never be lost sight of. This requires eternal vigilance on the part of every teacher. It is next to impossible for military instructors to do much to counteract the negligence of schools in this regard. This again has cost many men their commissions at camp. Three months is too short a time in which to teach an incorrigible "beater-around-the-bush" that there is only one way to answer a question, oral or written, and that is positively, clearly, and accurately. The form of the oral answer in our schools should be made an important consideration of instruction.

I have further noted at camp that some of our better military schools have turned out many products that have the bearing of the soldier in the ranks, but a totally different carriage as soon as they "fall out." Schools, military and non-military, should place more insistence on the bearing of pupils all the time. It should become a second

nature with them to walk and carry themselves with the bearing of an officer and a gentleman. This again is a characteristic that cannot be acquired in a short time and, when coupled with other disqualifying elements, has militated against the success of men in training camps.

A last important element that seems to me has been lacking in the moral and mental make-up of some of our students is "grit." Not that they would prove cowardly in battle, necessarily, but some have exhibited a tendency to throw up the sponge upon the administration of a severe rebuke or criticism. Their "feelings have been hurt" and they resign. They have never been taught the true spirit of subordination. They are not ready for the rough edges of life. The true training school should endeavor to inculcate that indomitable spirit that enables one to get out of self, to keep one's eyes fixed upon the goal rather than upon the roughness of the path, to realize that one unable to rise above the hard knocks of discipline cannot hope to face with equanimity the tremendous responsibilities of the officer under modern conditions of warfare. The idea of grit belongs in the schoolroom and on the campus as well as in the camp.

Very respectfully,
H. P. McCain
Adjutant General

Reports of Reading and Lectures. Reports of one's reading and of lectures are largely summaries. They follow closely the method prescribed in the section on Summaries and are made by applying the principles laid down in the Appendix, where the subject of note taking is treated. These reports should be readable and should contain all the essential

facts as they were presented by the writer or the speaker.

The following selection is a report of a lecture taken by the present writer while a student in college. It illustrates the nature and the form that the ultimate report on a lecture should have.

BENJAMIN FRANKLIN 1706–1790

In many ways, Franklin is the most important literary figure in the colonies. At least he is the most prominent one in the Middle States.

His work may be divided into five groups:

I. Autobiography. This important work is incomplete for it ends with the year 1757. It does, however, contain a postscript, but this part of it does not satisfactorily take care of the very interesting years of Franklin's life that follow the year 1757.

This work was not published satisfactorily until many years after Franklin's death. It is interesting to notice that it was first issued in a French translation and afterward an English translation of the French edition was issued. See McMaster's *Franklin* for an account of the wanderings of the manuscript.

In 1867, John Bigelow, at that time Minister to France, secured the manuscript and published it as it was originally written. There have been more than sixty editions of the book.

The English style of the book is excellent. Franklin had learned how to write from his study of the *Spectator* papers.

II. Essays on Local Subjects. Many of these are character sketches. "Letters of a Busybody" were published in Bradford's *Weekly Mercury*, 1729–1730. Also this type of essay is to be found in the "Silence Do Good"

letters in the *Boston Courant.* All of these papers are character sketches and go back to the character drawings of the seventeenth century as they are found in Overbury and later on in Addison and Steele in the eighteenth century.

III. Prefaces to Almanacs. *Poor Richard's Almanac* started in 1732. To it Franklin wrote prefaces until 1758. The great one of the lot is "Father Abraham's Speech." These prefaces were full of proverbs and were vastly popular. They were translated into many foreign languages. At least thirty editions were issued in French. The purport of many of them was the advantages of thrift.

IV. Political Satires. These were published mainly during the Revolution. They ridiculed the British Government. Some of the titles were "Rules for Transforming a Great Empire to a Small One," "The Edict of the King of Prussia," and a very famous one regarding the hiring of the Hessians in 1777. This particular letter, although it was not claimed by Franklin, has been attributed to him because of its style.

V. Bagatelles. Usually satirical little pieces published between 1778 and 1785 in France and printed on his little hand press there. Best of his work is that not written on political subjects. Among the best of these pieces are "Ephemera," "A Dialogue between Franklin and the Gout," "The Whistle," "Petition of the Left Hand," "The Handsome and the Deformed Leg." Another of these pieces, "To Madam Helvetius," was the precursor of the American short story, in form at least.

Conclusions: Franklin never made literature his life work and, although some of the pieces he has written are likely to be long remembered, his claim to fame as a man of letters is not so great as it might have been had he left behind him some one work complete and finished instead

of a great mass of what are, in the main, ephemeral writings on such matter as the time gave rise to.

EXERCISES

I. Prepare a report on some experiment, or series of experiments, which you have performed. State, first of all, the object of the experiment; then describe the apparatus that you used; and, finally, record your observations. Any conclusions that you may have arrived at in the course of your experimentation are to be stated at the end of the paper.

II. Make a report on one of the following subjects or on some similar subject:

The advantage of four-wheel brakes
Is the water supply of———sufficient?
Is a crossing watchman necessary at————?
Results attained by the installation of the——heating system
Conditions affecting the building of a railroad from—— to———
The necessity for the elimination of the grade crossing at———
The justification for the abandonment of passenger service on the———Railroad

III. Through the medium of the library catalogue and the magazine indexes, prepare a bibliography on one of the following subjects or on some other similar subject in which you may be interested:

Turbines	Air-Brakes
The Sonnet	Cliff Dwellers
Radio Control	Arctic Exploration
National Banks	Elizabethan Playhouses
Wireless Telephones	Causes of the French Revolution

IV. After having prepared the list of books that deal with the subject you have selected, examine those books and ascertain their value as aids in the preparation of a paper on the subject. Then prepare a list of these books and articles, with a statement under the title of each one of what it contains and of its value as part of the material for the subject. The following example will show the method to be pursued in the preparation of this sort of bibliography:

MOTORSHIPS: An Investigation into the Characteristics of Mercantile Vessels Propelled by Internal Combustion Engines. By A. C. Hardy. ix + 292 pp. Chapman and Hall. 1925.

Of the four sections into which this book is divided the first deals mainly with marine oil engines, the second with the character and arrangement of the auxiliary machinery required in motorships, the third with the transmission of the drive from the engine to the screw and with the Scott-Still combined oil and steam engine, and the fourth with the application of the oil engine to ships of various classes. Mr. Hardy's treatment is not highly technical and presumably he does not address himself to the professional naval architect or marine engineer, but he gives a workmanlike and balanced account of the motorship, its virtues and its failings. Such a book enables readers who are

neither engineers nor shipowners to gain an intelligent idea of the problems presented by motorships.

—Adapted from the *London Times Literary Supplement*

V. With the information gathered from the various sources noted in the bibliography write a detailed report of the subject you have been investigating.

APPENDIX

Note Taking

No matter is of greater importance for the student than that of taking notes. In college—and to a larger extent in the university—the information of the courses is presented in lecture form. Although it is true that much that is said in a lecture need not find its way into the student's notebook, nevertheless many things *should find their way there.* It is therefore desirable to know not only what to put down but also how to put that part down in the best and most readable fashion. Furthermore, the investigation of a subject that requires the reading of many books and articles necessitates the making of many notes on the material consulted. How to gather together this material in the form of notes so that it will be most accessible for further use is also one of the matters treated of in this section.

Kinds of Notes. All notes are obtained from two sources: (1) investigations and printed or written matter; and (2) oral discourse, *i.e.*, lectures, speeches, interviews, conversations, and the like.

The notes gathered from either one or the other of these sources also may be divided into two classes: (1) those for immediate use; and (2) those for

permanent record. Those which are to be used immediately need not be so carefully compiled nor need they be so elaborate as those designed for future use.

What follows has to do mainly with permanent notes. The principles that apply to this sort of notes also apply equally to notes designed for immediate use. The difference lies only in the fact that notes to be used very soon are likely to be more fragmentary, for the user of such memoranda depends more on his memory of the details than does he who has no expectation of using his notes until some time shall have elapsed.

Notes from Reading. In general, notes from reading are brief summaries of long articles or verbatim extracts from material that is of moment in the matter being investigated. The principles underlying the analysis of books and articles (see p. 25) can be put to use here, for it is necessary in making notes of this sort, not only to grasp the essential thought of the article but also to see the relationship of every part of the article to every other part and to be able to sum up the whole or any part of the article in a few words. The taking of such notes often becomes merely a matter of selection of parts. In this case the note taker must keep in mind: (1) the use he may wish to make of a certain part; (2) the relationship of that part to every other part of the same article; and (3) the general make-up of the whole article so that he may

be sure that what he has selected is not contradictory or qualified by the other matter contained in the selection.

Again, since the investigation of a subject and the gathering of material to be used in a discussion of it often involve the reading of a number of books and articles, some means should be employed for rapidly assembling the material gathered. Many a young investigator has found that he has been under the necessity of going back over book after book in order to verify his statements because, in the collection of his data, he has not carefully noted his sources. Furthermore, an immense amount of work is entailed in putting material together when the facts have not been properly separated from each other. The scheme of taking an article and noting fact after fact on a notebook page until the entire page is covered with a more or less heterogeneous mass of notes is very unsatisfactory. One never knows at what point on the page the particular fact one desires is to be found. There is not any way of making the place on the page known. The difficulty is greatly increased if on the same page notes from several sources have been set down.

In these connections it is to be remembered that due credit should always be given to the source of the material when the notation is made. Its value in the assembling of the material has been observed. The saving of time, when this is done at the moment the note is made, will be apparent on a little thought.

It has been found that the best results in note taking of this sort are secured when the various items gathered for any purpose are kept carefully separated from each other. The best and quickest results in the use of notes can be obtained when each individual notation is made on a card or on a separate sheet of paper. The following scheme has proved helpful:

Subject	Reference
	Name of author
	Name of article or book
	Volume and page
	Publication date
Topic treated on this card	
. . . . .	
Note on the particular topic:	

On the next page is a sample of such a note.

With such an arrangement for gathering the material, the assembling and organizing of it becomes a simple task of shuffling the papers or cards until the most coherent and emphatic arrangement has been secured.

Notes from Oral Discourse. Most students are

Marlowe, Christopher Hotson, J. Leslie
"Tracking Down a Murderer"
Atlantic Monthly, v. 135, p. 733
June, 1925

Death of Marlowe

An account of a search through the Records Office which resulted in finding the actual documents that recorded the manner of the death of Christopher Marlowe. The article tells how Marlowe was killed by one Ingram Frizer in a quarrel over the payment of the reckoning for an all-day feast that these two and two others had indulged in. Translations of the documents are given.

thrown into the important business of note taking unawares. Directions that would lighten their tasks are seldom given. The following suggestions —all of which have proved useful—are offered, therefore, to aid the novice in his note taking.

Although it seems unnecessary to make such a suggestion, experience has proved that the most necessary direction is *Come prepared.* This preparation means the possession of a stiff-back notebook with enough blank pages in it for the notes of the lecture; a *fountain pen filled with ink;* or enough *sharpened pencils* to last through the lecture.

The second direction is: *Do not hurry.* Listen carefully and get the ideas accurately. In a mad effort to get every word of the lecturer, many

students fill their notebooks with an incoherent and entirely unreadable jumble of words. Put down slowly and carefully what you can get of the important things that are said. Remember that speed comes with practice.

In the third place: *Put down each item on a separate line and keep it distinct from all other items that you have put down.* Do not attempt to save paper. It is poor economy. The separate items that indicate the main divisions should be on separate pages. The coördinate divisions of each part should be grouped so as to show that relationship, but enough space should always be left to enable the note taker to fill in afterward the statements that the hurry of the speaker prevented the student's filling in at the time of the lecture. It is suggested that the following system of indicating the relationship of the parts of the lecture be employed:

A. (Main Heading)
    I. (First Subordinate Heading)
        a. (Second Subordinate Heading)
            1. (Third Subordinate Heading)
B.
    I.
        a.
C.

Kinds of Lectures. There are two distinct types of oral discourse: the organized and the discursive. To take notes on the organized lecture is, as a rule, not difficult. In it the speaker either outlines his

speech at the beginning or else marks its stages or topics as he proceeds. The note taker then has merely to fill in the topics with such of the ideas presented as seem to him to develop that topic so that in reading his notes later he may be able to reconstruct from memory the speaker's entire thoughts on that particular phase of his address. Just what should be set down and what should be omitted can be determined only by experience and practice. The intonation of the speaker's voice, his gestures, the emphasis he gives or the amount of time that he devotes to some item, will indicate the value that the speaker attaches to parts of his discussion. Such sign posts may serve to indicate what the speaker considers important. It is to be remembered that mere illustrations and digressions interpolated to relieve the strain on the hearer's attention—no matter how much time the speaker devotes to them—should not be mistaken for essential parts.

For the discursive type of lecture no definite suggestions can be given. Here one must watch all the signals noted in the last paragraph and set down as many of the ideas that appear important as he can get. After he returns home, the notes must be reconstructed and rearranged so as to get coherence.

Suggested Short Cuts. Use should be made of the ordinary abbreviations, namely, *geog.* for *geography; Ger.* for *German* or *Germany; ex.* for *example; exam.* for *examination;* & for *and.* Simplified spelling is

helpful: *tho* for *though; altho* for *although; brot* for *brought;* and *ruf* for *rough.* Phonetic spellings or signs, if consistent, are helpful: *wh* for *when, who, which,* or *what,* according to the context; *R* for *are; B* for *be.* The equality sign as used in arithmetic may signify *are, is equal to, is,* or *is similar to.* In the same way other mathematical signs may be used: ∴ may stand for *therefore;* > *is equivalent to* or *is derived from.* The dagger, used so often to call attention to a footnote, when followed by a date in the discussion of a man's life signifies that on that date he died, as, (†1898) means died 1898. These few suggestions show how easily the note taker may construct a code for himself that will enable him to take notes rapidly and accurately. What has been given will no doubt suggest the possibility of making for oneself any number of other arbitrary symbols depending on the nature of the notes that are to be taken.

The use of shorthand in note taking proves a detriment to the note taker more often than a benefit. The tendency is to take too much of what has been said, to make no selection of ideas. And finally, there is often the tendency—since too much has been taken—to leave the notes in the shorthand characters. Often one forgets, after the lapse of some little time, just what the character was intended for; then the notes might just as well have been written in Egyptian hieroglyphics.

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1. DEFINITION
   A. DICTIONARY DEFINITION.
   B. ANALYZING IT.
   C. QUESTION
   D. ILLUSTRATE.
   E. DIFFERENCE

2. CHARACTERISTICS OF THE ESSAY.
   A. BRIEF.
   B. LITERARY WHOLE.
   C. INCOMPLETE TREATMENT.
   D. PROSE FORM.
   E. PERSONAL IN TONE.
   F. NEVER VULGAR.
   G. NOT DIDACTIC.
   H. DISTINCTIVE STYLE.
   I. CULTURED - ARISTOCRATIC FORM.

ESSAY MUST BE
CONVERSATIO
IN
TONE

3. KINDS OF ESSAYS.
   A. PERSONAL.
   B. DESCRIPTIVE.
   C. CHARACTER SKETCH.
   D. INFORMALLY CRITICAL.
   E. EDITORIAL
   F. REFLECTIVE (SEMI-SERIOUS).

phobia - fear
paranomastal - double meaning

Matt 7

WRITING [illegible]
SETTING

KNOWLEDGE
ATMOSPHERE
CHARACTER
DIALECT

social
political
economic
Religious.
Intellectual
} 5. phases of human activity.